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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

HYDROLOGIC STUDIES

COMPILATION OF
RAINFALL AND RUNOFF FROM THE WATERSHEDS
OF THE
SHELBY LOAM AND RELATED SOILS
CONSERVATION EXPERIMENT STATION
BETHANY, MISSOURI
1942

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PROCUREMENT SECTION
CURRENT SERIAL RECORDS

Prepared in cooperation
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May 1943

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

MONTH: Oct.-Nov.-Dec., 1942

PARCEL: Bethany, Wisconsin

SHEET: 5 OF 2 SHEETS

WATERSHED 1-58 & 1-1

Storm No.	Date	Watershed		Days No.	Rainfall			Maximum Intensity			Temperature (Degrees F)		Runoff			Remarks			
		Number	Area (acres)		Depth (inches)	Direction (Degrees)	Amount (inches)	Duration (hours)	Time (hours)	Amount (cfs)	Depth (inches)	Time (hours)	Amount (cfs)	Time (hours)					
															1st		2nd	3rd	4th
96	Oct. 3	1-58	2,112	5	7130A	225	.99	1.68	1.10	.90	76				None				
97	3	1-58	2,112	5			.03								None				
98	3	1-58	2,112	5	2135P	20	.08	.19	.32	.16	60				None			.000	
96	3	1-1	2,128	5	7130A	225	.99	1.68	1.10	.90	76		S.B.M.						
97	3	1-1	2,128	5			.03												
99	3	1-1	2,128	5	2135P	20	.08	.19	.32	.16	60				.02		1.05	.000	
99	4			5			.04				73	48			No Runoff				
100	29	1-58	2,112	5	8100P	20	.10	2.60	1.52	.50	70				None				
101	29	1-58	2,112	5			.02				54				None				
102	30	1-58	2,112	5			.06				62				None				
103	30	1-58	2,112	5			.01								None				
104	30	1-58	2,112	5	3155A	315	1.21	1.80	.72	.56	43	71.5A	9100A		.009	71.5A	1.21	.000	
100	29	1-1	2,128	5	8100P	20	.10	2.60	1.52	.50	70				None				
101	29	1-1	2,128	5			.02				54				None				
102	30	1-1	2,128	5			.06				62				None				
103	30	1-1	2,128	5			.01								None				
104	30	1-1	2,128	5	3155A	315	1.21	1.80	.72	.56	43	6153A	9153A		.02	.007	71.5A	1.19	.000
106	Nov. 4	1-58	2,112	5	4155P	260	.52	.72	.11	.13	57	38			None				
106	4-5	1-58	2,112	5	10180P	210	.19	.21	.12	.08	57	37			None				
107	5	1-58	2,112	5			.05				55				None				
108	5	1-58	2,112	5			.03				37				None			.000	
109	4	1-1	2,128	5	4155P	260	.32	.72	.11	.13	57	38		S.B.M.					
106	4-5	1-1	2,112	5	10180P	210	.18	.21	.12	.08	57	37							
107	5	1-1	2,128	5			.04				55								
108	5	1-1	2,128	5			.03				37				.03		.74	.000	
109	8			5			.04				65	44			No Runoff				
110	9			5			.08				50				No Runoff				
111	9			5			.04								No Runoff				
112	9			5			.02				26				No Runoff				
113	20-21			5	11130P	235	.34	.81	.10	.24	74	34			No Runoff				
114	21			5			.09	Rain & Snow			47				No Runoff				
115	21			5	1125P	275	.21	.36	.20	.11	31				No Runoff				
116	21-22			5			.10	Snow & Sleet			47	30			No Runoff				
117	22-23			5	10110P	220	.12	.12	.12	.10	43	30			No Runoff				
118	23			5			.08				43	32			No Runoff				
119	Dec. 5	1-58	2,112	5			.30	Snow			30	11			None				
120	11	1-58	2,112	5			.08	Snow			43	20			None				
119	Dec. 5	1-1	2,128	5			.20	Snow			30	11		S.B.M.					
120	11	1-1	2,128	5			.08	Snow			43	20			.02		.36	.000	
121	24			5			.21	Snow sleet & rain			31	19			No Runoff				
122	26	1-58	2,112	5	4135A	60	.16	.18	.32	.28	43			S.B.M.					
123	26	1-58	2,112	5	10130A	120	.72	.24	.24	.24	43	33							
124	27-28	1-58	2,112	5			.18	Snow & Sleet			43	21			.56		.50	.000	
122	26	1-1	2,128	5	4135A	60	.16	.18	.32	.28	43			S.B.M.					
123	26	1-1	2,128	5	10130A	120	.72	.24	.24	.24	43	33							
124	27-28	1-1	2,128	5			.18	Snow and Sleet			43	21			.05		1.01	.000	
1942 TOTALS																			
	1-58						33.92								2.39			.324	
	1-1						33.52								1.98			.118	

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

Month June-July-Aug., 1912

Project Bethany, Missouri

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Sheet 2 of 3

WATERSHED I-53 & I-1

Storm No.	Date	WATERSHED					RAINFALL			TRANSMISSION (Section 7)		REPORT				RAINFALL (inches)	Run Loss (cfs per acre)	CONDITION OF WATERSHED		
		Number	Area (acres)	Open %	Slope (ft/100)	Drainage (miles)	Actual (inches)	Maximum Intensity			Maximum	Minimum	Rain (inches)	Total (inches)	Amount (inches)				Maximum Rate	
								1st 15 min	1st 30 min	1st 1 hour									1st 15 min	1st 30 min
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)			
44	June 6	5				.27				87	67			No run-off		.07	June 1. I-1. Strip C.			
45	9	5				.05				87	63			No run-off		.05	Cut clover. 2x07 7/4.			
46	10	5				.13				84	65			No run-off		.13				
47	11	5				.08				79				No run-off		.08	June 5. I-1. Strip B.			
48	11	5				.02								No run-off		.02	Cultivate corn.			
49	11	5				.02					68			No run-off		.02				
50	12	5				.10				79	55			No run-off		.10				
51	17	5				.10				79	58			No run-off		.10	June 17. I-58. Cuts M to L2.			
52	18	5				.13				84				No run-off		.13	2 inches high. Surface soil moist			
53	18	5				.09					63			No run-off		.09	and packed.			
54	19	5				.06				87	65			No run-off		.06	I-1. Strip A. Cuts 30 to 45 in.			
55	20	I-53	2,112	5	1,122	265	1.31	3.74	1.87	1.73			4,129	5,004	.02	.359	High and headed. C1 and 11m.			
56	20	I-53	2,112	5	7,174	75	.16	.36	.32	.26	65				None		8 to 12 in. high. Surface soil			
57	20	I-1	2,128	5	1,224	265	1.31	3.74	1.87	1.73	85		4,129	6,104	.07	.359	moist and packed.			
58	20	I-1	2,128	5	7,174	75	.16	.36	.32	.26	60				None		Strip B. Corn 22 to 25 in. high.			
59	21			5	7,152	80	.18	.24	.20	.18	78	62			No run-off		Surface soil moist and loose.			
60	25	I-58	2,112	5	1,104	472	1.12	.36	.28	.22	75	61			None		Strip C. C1. 3 1/2 in. new shoots			
61	25	I-1	2,128	5	1,104	472	1.12	.36	.28	.22	75	61			None		starting.			
62	3			5	3,154	90	.33	1.56	.68	.38	82	61			No run-off		July 2. I-58. New brown grass			
63	9			5			.03				90				None		from waterway for hay.			
64	9			5	7,154	115	.10	.60	.20	.30	87	73			No run-off		July 6. I-1. Strip A. Harvest			
65	12			5	10,154	150	.10	.36	.12	.06	88	69			No run-off		oats. I-58. Harvest bats.			
66	19			5			.11				87	73			No run-off		July 17. I-58. Cut stubble.			
67	21			5			.06				81	64			No run-off		Leap. 10 to 12 inches high. Fair			
68	21-25	I-53	2,112	5	10,104	130	1.32	6.00	3.12	1.80	87	56			None		stand.			
69	21-25	I-1	2,128	5	10,104	130	1.32	6.00	3.12	1.80	87	56			None		I-1. Surface soil dry.			
70	30			5	8,104	95	.15	.60	.32	.20	93	72			No run-off		July 23. I-1. Strip A. Cuts			
71	Aug. 3			5	1,124	190	.27	.36	.24	.16	.82	64			No run-off		stubble, clover and 11m. 4 to 6			
72	6	I-58	2,112	5	12,104	130	.86	3.36	2.24	1.32	86				None		inches high. Surface soil dry and			
73	6	I-58	2,112	5			.02				65				None		packed.			
74	6	I-1	2,128	5	12,104	130	.86	3.36	2.24	1.32	86				None		Strip B. Corn 6 to 7 ft. high,			
75	6	I-1	2,128	5			.02				65				None		and tasseled. Surface soil dry			
76	7	I-58	2,112	5	6,004	25	.02	.06	.08	.11	85				None		and loose.			
77	7	I-58	2,112	5	7,154	25	.51	2.64	1.32	1.02					None		Strip C. Clover 16 to 18 inches			
78	7	I-58	2,112	5			.04				68				None		high. Second growth. Surface			
79	7	I-1	2,128	5	6,004	25	.02	.06	.08	.11	85				None		soil packed and dry.			
80	7	I-1	2,128	5	7,154	25	.51	2.64	1.32	1.02					None		July 31. I-1. Strip C. Cut			
81	7	I-1	2,128	5			.04				68				None		clover. Yield 307 lb/A.			
82	13	I-58	2,112	5			.03				85	68			No run-off		Aug. 5. I-58. Thresh oats.			
83	14	I-58	2,112	5	4,504	90	.03	3.12	1.34	1.18	81	60			None		Yield 27.2 bu/A.			
84	14	I-58	2,112	5			.09				82	63			None		I-1. Thresh oats. Yield			
85	13	I-1	2,128	5	4,504	90	.03	3.12	1.34	1.18	81	60			None		39.4 bu/A.			
86	14	I-1	2,128	5			.09				82	63			None		Aug. 21. I-58. Cut and bale			
87	25	I-58	2,112	5	5,172	220	.62	.72	.18	.10	75				None		lespedeza hay. Yield 17.1 lb/A.			
88	25	I-58	2,112	5			.01				58				None					
89	25	I-58	2,112	5			.06				78				None					
90	25	I-58	2,112	5	7,154	124	.33	.24	.24	.24	63				None					
91	25	I-1	2,128	5	5,172	220	.62	.72	.18	.10	75				None		Aug. 27. I-58. New growth of			
92	25	I-1	2,128	5			.01				58				None		leaves approximately 3 in. high.			
93	25	I-1	2,128	5			.06				78				None		Surface moist and packed.			
94	25	I-1	2,128	5	7,154	124	.33	.24	.24	.24	63				None		I-1. Strip A. Young clover 6			
95	27			5			.02				91	72			No run-off		to 10 inches high, fair stand.			
96	1			5	5,154	140	.13	1.68	1.24	.56	91	68			No run-off		Surface soil moist and packed.			
97	5			5			.03				77				No run-off					
98	5			5	9,104	25	.11	.36	.24	.22					No run-off		Strip B. Corn 7 to 9 ft. high.			
99	6			5			.07				66				No run-off		Farn in dent stage. Surface soil			
100	6			5	2,254	145	.72	.04	.24	.22	71	62			No run-off		loose and moist.			
101	7			5	3,404	75	.11	1.44	.80	.72	80	67			No run-off		Strip C. New growth of clover			
102	8	I-53	2,112	5	3,004	185	1.55	3.36	2.36	1.92	76		3,135	4,104	.03	.009	4 to 6 inches high. Surface			
103	8	I-1	2,128	5	3,134	185	1.55	3.36	2.36	1.92	76		3,135	4,104	.06	.110	moist and packed.			
104	14	I-58	2,112	5	6,304	15	.21	1.68	1.24	.62	87				None					
105	14	I-58	2,112	5	11,352	20	.23	1.50	.80	.58	82	66			None					
106	15	I-58	2,112	5	1,154	145	.76	1.50	.80	.58	82	62	2,130	3,154	.01	.004	2,130			
107	14	I-1	2,128	5	6,304	15	.21	1.68	1.24	.62	87				None					
108	14	I-1	2,128	5	11,352	20	.23	1.50	.80	.58	82	66			None					
109	15	I-1	2,128	5	1,154	145	.76	1.50	.80	.58	82	62	2,130	3,154	.02	.001	2,130			
110	18			5	7,004	115	.14	2.40	.68	.16	86	61			No run-off					
111	18-22			5			.03				86	51			No run-off					
112	22			5			.06				65	38			No run-off					
113	25			5	6,454	500	.03	.24	.20	.18	50				No run-off					
114	25			5			.05				37				No run-off					

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH
Month Jan-Feb-Mar-Apr, 1942Project Bethany, Missouri

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Sheet 1 of 3 sheetsWATERSHEDS 1-53 & 15-1

Storm No.	Date	Watershed			Rainfall			Maximum Intensity			Maximum Duration			Run-off			Rainfall			Run-off			Remarks		
		Number	Area (Ac.)	Dist. (M.)	Depth (In.)	Duration (Hrs.)	Intensity (In./Hr.)	15 min. (In./Hr.)	30 min. (In./Hr.)	1 Hr. (In./Hr.)	1 Hr. (Hrs.)	2 Hr. (Hrs.)	3 Hr. (Hrs.)	4 Hr. (Hrs.)	5 Hr. (Hrs.)	6 Hr. (Hrs.)	7 Hr. (Hrs.)	8 Hr. (Hrs.)	9 Hr. (Hrs.)	10 Hr. (Hrs.)	11 Hr. (Hrs.)	12 Hr. (Hrs.)	13 Hr. (Hrs.)	14 Hr. (Hrs.)	15 Hr. (Hrs.)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
1	Jan. 1						.23	Snow			27	8			No run-off		.03								Blizzard. Ground frozen 3 to 5 inches deep.
2	7						.1	Snow			9	20			No run-off		.1								1-53. Area in residue of lesp. 1-51. Strip dropped.
3	Feb. 2						.03	Snow			30	25			No run-off		.03								Strip A. Residue of 12-1 corn 20-25.
4	11						.08	Rain			45	37			No run-off		.08								Strip B. Fall plowed ground.
5	5-6	1-53	2,112	5	7:30P	225	.04	1.0	.37	.37	1.5	30	8:35P	8:00A	.15	.005	10:15P	.79	.001						Strip C. Residue of 19-1 seeded clover.
5	5-6	1-53	2,123	5	7:30P	225	.04	1.0	.37	.37	1.5	30	8:35P	8:00A	.11	.007	10:15P	.83	.007						Strip D. permanent meadow.
6	8-9	1-53	2,112	5			.15	Snow			31	25													Surface soil moist and subsoil wet before storm No. 5. Ground not frozen.
7	11	1-53	2,112	5			.01	Snow			39	16													Runoff from melting snow and rain from storm No. 6 to 11 in.
8	11-15	1-53	2,112	5			.10	Very wet snow			30	23													Some estimating required to determine amount of runoff.
9	11-15	1-53	2,112	5			.12	Rain and snow			13	23													Drifts 5 to 6 feet deep from storm Nos. 12 & 13.
10	15	1-53	2,112	5	2:00P	200	.34	1.0	.36	.36	1.3	28													Ground wet before storm No. 13.
11	16	1-53	2,112	5			.04	Rain			13	25													
12	22-23	1-53	2,112	5			.18	Snow			1.0	23													
13	27	1-53	2,112	5			.05	Snow			30	19													
12	22-23	1-53	2,112	5			.18	Snow			1.0	23													
13	27	1-53	2,112	5			.05	Snow			30	19													
14	Mar. 12						.02				45	28			No run-off		.02								April 8, 1-53. Drill oats at the rate of 6 pks./A. with 125 lbs of 0-20-0 fertilizer per acre.
15	16	1-53	2,112	5	6:05A	90	.16	1.8	.20	.20	59	33													1-51. Strip A. Rice and drill oats at the rate of 6 pks./A. with 65 of clover, 65 of timothy 25 of alfalfa and 200 of 0-20-0 Fertilizer per acre.
16	16	1-53	2,112	5	9:15A	285	.17	1.8	.20	.20	59	33													
15	16	1-53	2,112	5	6:05A	90	.16	1.8	.20	.20	59	33													
16	16	1-53	2,112	5	9:15A	285	.17	1.8	.20	.20	59	33													
17	29						.03				59	47			No run-off		.03								
18	25	1-53	2,112	5	8:35A	600	1.80	1.60	.47	.46	70	47	11:25A	6:50P	.15	.322	4:25P	1.45	.005						Ground wet before storm No. 19.
19	25	1-53	2,112	5	8:35A	600	1.80	1.60	.47	.46	70	47	10:15A	8:50P	.30	.238	4:27P	1.42	.008						
19	Apr. 2						.06				72	18			No run-off		.06								
20	6						.09				67	15			No run-off		.09								
21	13						.16				70	39			No run-off		.16								
22	25						.15				76	39			No run-off		.15								
23	25						.17				57				No run-off		.17								
24	Apr. 25						.07				76	57			No run-off		.07								
25	25-26						.16				76	55			No run-off		.16								
26	27						.08				74				No run-off		.08								
27	27						.12				53	53			No run-off		.12								
28	30						.12				82	62			No run-off		.12								
29	May 2	1-53	2,112	5			.05				62				None		.05								
30	2	1-53	2,112	5	4:30P	190	1.01	1.44	1.42	.86			7:03P	7:15P	.05	.397	7:15P	.96	.010						Soil moist before storm No. 30.
31	2	1-53	2,112	5	8:50P	35	.09	.18	.17	.10	45				None		.09								May 2, 1-53. Oats 4 in. high. lesp. 1 in. high. Grass in water-way 10 inches high.
30	2	1-53	2,112	5			.05				62				None		.05								
31	2	1-53	2,112	5	4:30P	190	1.01	1.44	1.42	.86			7:05P	8:15P	.02	.037	7:15P	.99	.001						1-51. Strip A. Oats 2 to 3 in. high.
32	2	1-53	2,112	5	8:50P	35	.09	.18	.17	.10	45				None		.09								Strip C. Clover 12 in. high.
33	5	1-53	2,112	5	12:35P	295	.72	3.24	1.60	.92	59	45	12:47P	2:18P	.12	.413	1:150P	.60	.066						May 5. Soil wet before storm No. 32.
33	5	1-53	2,112	5			.02				59	45	12:51P	4:17P	.04	.289	12:56P	.68	.006						
34	5	1-53	2,112	5			.02				59	45	12:51P	4:17P	.04	.289	12:56P	.68	.006						
35	9	1-53	2,112	5	11:10A	68	.14	.36	.20	.16	71				None		.14								Soil moist before storm No. 35.
36	9	1-53	2,112	5	5:00P	24	.52	3.56	1.53	1.04	65	50	5:13P	6:07P	.20	.272	5:17P	.24							
37	10	1-53	2,112	5			.05				65	50			None		.05								
38	11	1-53	2,112	5	3:05A	230	.36	.60	.28	.20	77	58	6:11A	7:50A	.05	.075	6:15A	.31	.213						Soil too wet to work before storm No. 37.
39	9	1-53	2,112	5	11:10A	68	.14	.36	.20	.16	71				None		.14								
40	9	1-53	2,112	5	5:00P	24	.52	3.56	1.53	1.04	65	50	5:18P	6:16P	.11	.478	5:21P	.41							
41	10	1-53	2,112	5			.05				65	50			None		.05								
42	11	1-53	2,112	5	3:05A	230	.36	.60	.28	.20	77	58	6:13A	9:30A	.03	.037	6:15A	.33	.041						May 20, 1-53. Strip B. Diso, and plant corn.
43	14						.19	.24	.16	.12	72	41			No run-off		.19								
44	17	1-53	2,112	5	1:55	24	.53	3.56	.84	.48	77	56	9:15P	10:55P	.04	.174	9:17P	.49	.004						
45	17	1-53	2,112	5	8:50P	100	.53	3.56	.84	.48	77	56	10:02P	8:15A	.01	.042	10:05P	.50	.001						
46	22						.09				63	53			No run-off		.09								
47	25	1-53	2,112	5			.09				72	43			None		.09								
48	26	1-53	2,112	5	12:53A	15	.18	1.60	.72	.36	85	60			None		.18								
49	25	1-53	2,112	5			.09				72	43			None		.09								
50	26	1-53	2,112	5			.18	1.60	.72	.36	85	60			None		.18								
51	5/31-6/1	1-53	2,112	5	9:05P	200	.71	1.92	1.44	.92	85	60			None		.71								
52	5/31-6/2	1-53	2,112	5	9:05P	200	.71	1.92	1.44	.92	85	60			None		.71								

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

Month July-Aug.-Sept. 1962

PROJECT. Botany, Missouri

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

SHEET 2 OF 3 SHEETS

Form No.	Date	Time	Location	Area	Yield	Moisture	Notes
50	July 3	1-3	L-10	3.15	50	30	No run-off
60	9			7.05A	100	30	No run-off
61	9			10.15A	150	30	No run-off
62	12			10.15A	150	30	No run-off
63	19			10.15A	150	30	No run-off
64	21			10.15A	150	30	No run-off
65	21-25			10.15P	190	30	No run-off
66	30			10.15P	190	30	No run-off
67	Aug. 3			1.27A	190	30	No run-off
68	6			12.15A	135	30	No run-off
69	6			6.05A	25	30	No run-off
70	7			7.55A	30	30	No run-off
71	7					30	No run-off
72	7					30	No run-off
73	7					30	No run-off
74	13			1.50P	90	30	No run-off
75	11					30	No run-off
76	25			5.15P	215	30	No run-off
77	25					30	No run-off
78	26					30	No run-off
79	26			7.10A	125	30	No run-off
80	27					30	No run-off
81	Sept. 1			5.25P	90	30	No run-off
82	Sept. 5	1-3		9.00A	35	30	No run-off
83	5					30	No run-off
84	5			1.15A	140	30	No run-off
85	6					30	No run-off
86	7			3.45P	70	30	No run-off
87	8			2.05P	185	30	No run-off
88	11			6.10P	12	30	No run-off
89	11			11.35P	25	30	No run-off
90	15			1.15A	170	30	No run-off
91	18			6.15P	115	30	No run-off
92	18-19					30	No run-off
93	22					30	No run-off
94	25			4.45A	135	30	No run-off
95	25					30	No run-off
96	Oct. 3			7.10A	225	30	No run-off
97	3			2.10P	25	30	No run-off
98	3					30	No run-off
99	1					30	No run-off
100	29			5.10P		30	No run-off
101	29					30	No run-off
102	29					30	No run-off
103	30			3.10A	310	30	No run-off
104	30					30	No run-off
105	Nov. 1			1.15P	200	30	No run-off
106	1-5			10.10P	215	30	No run-off
107	5					30	No run-off
108	5					30	No run-off
109	8					30	No run-off
110	9					30	No run-off
111	9					30	No run-off

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

Month Jan Feb Mar Apr May 1941

Sheet 1 of 3

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Storm No.	Date	Time	Amount of Rain (inches)	Direction of Wind	Direction of Run-off	Area of Watershed (acres)	Run-off (cfs)	Peak Run-off (cfs)	Duration of Run-off (hrs)	Remarks
1	Jan. 1	1:00	1.4	S	S	100	100	100	100	
2	7									
3	Feb. 2									
4	4									
5	5-6		7.3	S	S	100	100	100	100	Subsill and surface soil moist before storm No. 5. Ground not frozen.
6	8-9									
7	11									
8	14									
9	15-16		2.0	S	S	100	100	100	100	
10	15									
11	16									
12	20-21									
13	27									
14	Mar. 1									
15	14		6.0	S	S	100	100	100	100	
16	16		9.0	S	S	100	100	100	100	
17	20									Ground wet before storm No. 17. Apr. 6, 1941. Gage No. 10 placed in operation. Area of watershed from 10:00 to 11:00.
18	25		8.0	S	S	100	100	100	100	
19	Apr. 2									
20	6									
21	13		1.3	S	S	100	100	100	100	
22	20		1.0	S	S	100	100	100	100	Apr. 2-5. Discharge at rate of 6 cfs per acre.
23	20		3.0	S	S	100	100	100	100	Surface soil dry before storm No. 23.
24	20									
25	20		10.0	S	S	100	100	100	100	
26	27									
27	27		10.0	S	S	100	100	100	100	
28	30		6.0	S	S	100	100	100	100	Soil moist before storm No. 28.
29	May 2									
30	2		1.0	S	S	100	100	100	100	
31	2		8.0	S	S	100	100	100	100	
32	5									
33	5		12.0	S	S	100	100	100	100	Soil wet before storm No. 33.
34	May 9		11.0	S	S	100	100	100	100	Soil moist before storm No. 34.
35	9		5.0	S	S	100	100	100	100	
36	10									
37	11		3.0	S	S	100	100	100	100	Soil too wet to work before storm No. 37.
38	11		9.0	S	S	100	100	100	100	
39	11		8.0	S	S	100	100	100	100	
40	22									
41	25									
42	25		10.0	S	S	100	100	100	100	May 29. Good stand oats 12 to 15 inches high.
43	5/31-6/1		9.0	S	S	100	100	100	100	Surface soil moist and loose.
44	June 6									
45	9									
46	10		3.0	S	S	100	100	100	100	
47	11									
48	11									
49	11									
50	12		9.0	S	S	100	100	100	100	
51	17									
52	18		7.0	S	S	100	100	100	100	June 17. Good stand oats 30 to 40 inches high and headed.
53	18									
54	19									
55	20		1.0	S	S	100	100	100	100	
56	20		7.0	S	S	100	100	100	100	Oats flattened by wind.
57	21		7.0	S	S	100	100	100	100	
58	25		1.0	S	S	100	100	100	100	

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

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Month Nov.-Dec.
Sheet 3 of 3

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Project Detiary, Missouri

TABLE NO. 5-2

Storm No.	Date	Weather		Storm No.	Time (hours)	Rainfall			Evaporation			Runoff			Runoff per inch of rain	Remarks
		No.	Wind			Amount (inches)	Duration (minutes)	Direction	Amount (inches)	Direction	Amount (inches)	Amount (inches)	Time (hours)	Direction		
125	Nov. 21	4	SE	1425P	275	.21			.20		.24					
126	21-22					.10			Snow and sleet							
127	22-23			1010P	220	.12			.12		.10					
128	23					.00			Snow and rain							
129	Dec. 5	6	SE			.20			Snow							
130	11	2	SE			.00			Snow							
131	21	2	SE			.31			Snow, sleet and rain							
132	26	3	SE	435A	60	.15			.26		.23					
133	26	3	SE	1015A	120	.15			.24		.24					
134	27-29	3	SE			.10			Rain and snow							
1942 TOTALS																
						32.83									3.29	
																.581

Runoff occurred on Dec. 17
from melting snow of storm Nov.
119 and 120.Rain
and sleet

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

RECORD OF SINGLE STUDIES AND TREATMENT RESULTS ON VARIOUS WATERSHEDS

Month, Date, July, Aug. 1912

No. 1 3

Station No.	Date	Time	Location	Area	Soil	Moisture	Temperature	Wind	Direction	Speed	Barometer	Relative Humidity	Clouds	Remarks
57	June 21	10:30	71.5P	80	.21	.21	.16	.16	70	60	No rain-off	.19		
58	25		71.5P	100	1.32	.18	.20	.21	75	61	No rain-off	.19		
59	July 3		71.5P	90	.30	1.08	.56	.30	82	61	No rain-off	.19		
60	9		71.5P	105	.10	.60	.40	.10	80	71	No rain-off	.19		
61	9		71.5P	105	.10	.60	.40	.10	80	71	No rain-off	.19		July 9. 1st rain since June.
62	12		71.5P	150	.20	.35	.12	.06	88	69	No rain-off	.19		
63	19		71.5P	111	.11	.87	.73		87	73	No rain-off	.19		July 17. Surface soil dry.
64	21		71.5P	105	.05	.81	.61		81	61	No rain-off	.19		
65	24-25		71.5P	182	1.25	5.74	2.76	1.58	87	61	No rain-off	.19		
66	30		71.5P	95	.13	.48	.20	.14	91	71	No rain-off	.19		
67	Aug. 3		71.5P	190	.26	.21	.16	.16	82	61	No rain-off	.19		
68	6		71.5P	135	.01	2.88	2.01	1.17	86		No rain-off	.19		Aug. 5. 1st rain since June. 1st rain since June.
69	7		71.5P	25	.20	1.78	.10	.10	85		No rain-off	.19		
70	7		71.5P	30	.25	1.78	.10	.10	85		No rain-off	.19		
71	7		71.5P	30	.25	1.78	.10	.10	85		No rain-off	.19		
72	7		71.5P	30	.25	1.78	.10	.10	85		No rain-off	.19		
73	7		71.5P	30	.25	1.78	.10	.10	85		No rain-off	.19		
74	13		71.5P	90	.40	2.74	1.61	.61	81	60	No rain-off	.19		
75	13		71.5P	90	.40	2.74	1.61	.61	81	60	No rain-off	.19		
76	23		71.5P	235	.42	.74	.56	.46	75	58	No rain-off	.19		Aug. 20. 1st rain since June. 1st rain since June.
77	23		71.5P	235	.42	.74	.56	.46	75	58	No rain-off	.19		
78	23		71.5P	235	.42	.74	.56	.46	75	58	No rain-off	.19		
79	23		71.5P	235	.42	.74	.56	.46	75	58	No rain-off	.19		
80	23		71.5P	235	.42	.74	.56	.46	75	58	No rain-off	.19		
81	Sept. 1	10:30	71.5P	30	.14	3.74	2.32	1.20	81	63	No rain-off	.19		
82	5		71.5P	31	.13	.21	.20	.20	77		No rain-off	.19		
83	5		71.5P	31	.13	.21	.20	.20	77		No rain-off	.19		
84	5		71.5P	31	.13	.21	.20	.20	77		No rain-off	.19		
85	6		71.5P	140	.12	.21	.20	.20	71	62	No rain-off	.19		
86	7		71.5P	70	.13	1.40	.60	.53	80	67	No rain-off	.19		
87	8		71.5P	180	1.31	2.5	1.12	1.12	75	63	No rain-off	.19		
88	11		71.5P	12	.30	1.70	1.20	.60	87		No rain-off	.19		
89	11		71.5P	55	.22	1.70	.70	.21	80	62	No rain-off	.19		
90	11		71.5P	100	.70	1.74	.72	.61	80	62	No rain-off	.19		
91	15		71.5P	140	.10	2.75	1.70	.50	86	61	No rain-off	.19		
92	15		71.5P	140	.10	2.75	1.70	.50	86	61	No rain-off	.19		
93	22		71.5P	140	.10	2.75	1.70	.50	86	61	No rain-off	.19		
94	23		71.5P	140	.10	2.75	1.70	.50	86	61	No rain-off	.19		
95	23		71.5P	140	.10	2.75	1.70	.50	86	61	No rain-off	.19		
96	Oct. 3		71.5P	200	.03	1.40	1.20	.70	76		No rain-off	.19		
97	3		71.5P	25	.03	.8	.20	.12	60		No rain-off	.19		
98	3		71.5P	25	.03	.8	.20	.12	60		No rain-off	.19		
99	4		71.5P		.03				75	48	No rain-off	.19		
100	29		71.5P	18	.36	2.16	1.20	.72	70	51	No rain-off	.19		
101	29		71.5P		.02						No rain-off	.19		
102	31		71.5P		.02						No rain-off	.19		
103	31		71.5P		.02						No rain-off	.19		
104	31		71.5P	315	1.17	1.14	.61	.48	43	71.5P	No rain-off	.19		Wheat 2 to 4 inches high.
105	Nov. 1		71.5P	260	.15	.28	.32	.32	57	37	No rain-off	.19		
106	1-5		71.5P	235	.15	.28	.32	.32	57	37	No rain-off	.19		
107	5		71.5P		.05				55	37	No rain-off	.19		
108	5		71.5P		.02				55	37	No rain-off	.19		
109	8		71.5P		.02				65	41	No rain-off	.19		
110	9		71.5P		.02				70	41	No rain-off	.19		
111	9		71.5P		.03				70	41	No rain-off	.19		
112	9		71.5P		.02				70	41	No rain-off	.19		
113	20-21		71.5P	235	.14	.31	.40	.21	71	41	No rain-off	.19		
114	21		71.5P		.06				71	41	No rain-off	.19		

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Month Jan-Feb-Mar-Apr-May

Sheet 11 of 11

Storm No.	Date	Time	Location	Wind	Temp	Humidity	Clouds	Barometer	Rain	Run-off	Remarks
1	Jan. 1	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
2	Jan. 2	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
3	Jan. 3	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
4	Jan. 4	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
5	Jan. 5	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
6	Jan. 6	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
7	Jan. 7	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
8	Jan. 8	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
9	Jan. 9	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
10	Jan. 10	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
11	Jan. 11	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
12	Jan. 12	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
13	Jan. 13	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
14	Jan. 14	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
15	Jan. 15	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
16	Jan. 16	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
17	Jan. 17	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
18	Jan. 18	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
19	Jan. 19	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
20	Jan. 20	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
21	Jan. 21	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
22	Jan. 22	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
23	Jan. 23	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
24	Jan. 24	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
25	Jan. 25	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
26	Jan. 26	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
27	Jan. 27	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
28	Jan. 28	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
29	Jan. 29	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
30	Jan. 30	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
31	Jan. 31	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
32	Jan. 32	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
33	Jan. 33	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
34	Jan. 34	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
35	Jan. 35	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
36	Jan. 36	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
37	Jan. 37	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
38	Jan. 38	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
39	Jan. 39	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
40	Jan. 40	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
41	Jan. 41	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
42	Jan. 42	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
43	Jan. 43	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
44	Jan. 44	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
45	Jan. 45	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
46	Jan. 46	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
47	Jan. 47	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
48	Jan. 48	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
49	Jan. 49	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
50	Jan. 50	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
51	Jan. 51	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
52	Jan. 52	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
53	Jan. 53	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
54	Jan. 54	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
55	Jan. 55	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	
56	Jan. 56	10:00	W. 1/2 S.	10	40	70	100	30.00	.00	0.00	

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS
 WATERSHED D-1

Month-Year-Dec. 1912

Project - Pottery, Missouri

Sheet 3 of 3

Storm No.	Date	Watershed		Rainfall					Temperature (F)		Runoff				Remarks
		Name	Area (Acres)	Gage No.	Depth (Inches)	Duration (Hours)	Amount (Inches)	Direction	Max. Min.	Mean	Peak (CFS)	Base (CFS)	Volume (Ac-Feet)	Rate (CFS per In.)	
115	Nov. 21	1-1	7,500	10107	2.75		.21		50	40	10	10	10	.01	
116	Nov. 22						.15		50	40	10	10	10	.01	
117	Nov. 23			10107	2.00		.10		50	40	10	10	10	.01	
118	Nov. 24						.05		50	40	10	10	10	.01	
119	Dec. 5						.20		50	40	10	10	10	.01	
120	Dec. 11						.20		50	40	10	10	10	.01	Runoff occurred on Dec. 17 from melting snow of storm Nov. 11y and 120.
121	Dec. 21						.21		50	40	10	10	10	.01	
122	Dec. 26			5135A	.60		.75		50	40	10	10	10	.01	
123	Dec. 26			10130A	1.20		.75		50	40	10	10	10	.01	Rain and sleet.
124	Dec. 27						.20		50	40	10	10	10	.01	
1912 TOTALS															
C-1							3.85						3.65		785

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Month June-July-Aug-Sept., 1912

Sheet 3 of 3

Project Bethany, Missouri

Storm No.	Date	Time	Direction	Force	Amount	Run-off	Remarks
54	June 1	10:00	SE	10	1.00	1.00	
55	June 3	10:00	SE	10	1.00	1.00	
56	June 3	10:00	SE	10	1.00	1.00	
57	June 3	10:00	SE	10	1.00	1.00	
58	June 3	10:00	SE	10	1.00	1.00	
59	June 3	10:00	SE	10	1.00	1.00	
60	June 3	10:00	SE	10	1.00	1.00	
61	June 3	10:00	SE	10	1.00	1.00	
62	June 3	10:00	SE	10	1.00	1.00	
63	June 3	10:00	SE	10	1.00	1.00	
64	June 3	10:00	SE	10	1.00	1.00	
65	June 3	10:00	SE	10	1.00	1.00	
66	June 3	10:00	SE	10	1.00	1.00	
67	June 3	10:00	SE	10	1.00	1.00	
68	June 3	10:00	SE	10	1.00	1.00	
69	June 3	10:00	SE	10	1.00	1.00	
70	June 3	10:00	SE	10	1.00	1.00	
71	June 3	10:00	SE	10	1.00	1.00	
72	June 3	10:00	SE	10	1.00	1.00	
73	June 3	10:00	SE	10	1.00	1.00	
74	June 3	10:00	SE	10	1.00	1.00	
75	June 3	10:00	SE	10	1.00	1.00	
76	June 3	10:00	SE	10	1.00	1.00	
77	June 3	10:00	SE	10	1.00	1.00	
78	June 3	10:00	SE	10	1.00	1.00	
79	June 3	10:00	SE	10	1.00	1.00	
80	June 3	10:00	SE	10	1.00	1.00	
81	June 3	10:00	SE	10	1.00	1.00	
82	June 3	10:00	SE	10	1.00	1.00	
83	June 3	10:00	SE	10	1.00	1.00	
84	June 3	10:00	SE	10	1.00	1.00	
85	June 3	10:00	SE	10	1.00	1.00	
86	June 3	10:00	SE	10	1.00	1.00	
87	June 3	10:00	SE	10	1.00	1.00	
88	June 3	10:00	SE	10	1.00	1.00	
89	June 3	10:00	SE	10	1.00	1.00	
90	June 3	10:00	SE	10	1.00	1.00	
91	June 3	10:00	SE	10	1.00	1.00	
92	June 3	10:00	SE	10	1.00	1.00	
93	June 3	10:00	SE	10	1.00	1.00	
94	June 3	10:00	SE	10	1.00	1.00	
95	June 3	10:00	SE	10	1.00	1.00	
96	June 3	10:00	SE	10	1.00	1.00	
97	June 3	10:00	SE	10	1.00	1.00	
98	June 3	10:00	SE	10	1.00	1.00	
99	June 3	10:00	SE	10	1.00	1.00	
100	June 3	10:00	SE	10	1.00	1.00	
101	June 3	10:00	SE	10	1.00	1.00	
102	June 3	10:00	SE	10	1.00	1.00	
103	June 3	10:00	SE	10	1.00	1.00	
104	June 3	10:00	SE	10	1.00	1.00	
105	June 3	10:00	SE	10	1.00	1.00	
106	June 3	10:00	SE	10	1.00	1.00	
107	June 3	10:00	SE	10	1.00	1.00	
108	June 3	10:00	SE	10	1.00	1.00	
109	June 3	10:00	SE	10	1.00	1.00	
110	June 3	10:00	SE	10	1.00	1.00	
111	June 3	10:00	SE	10	1.00	1.00	
112	June 3	10:00	SE	10	1.00	1.00	

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Month: Jan Feb Mar Apr May, 1940

Sheet: 1 of 3

Storm No.	Date	Name	Area (Ac.)	Time (Hrs.)	Duration (Hrs.)	Intensity (In./Hr.)	Run-off (Ac.-In.)	Remarks
1	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
2	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
3	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
4	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
5	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
6	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
7	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
8	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
9	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
10	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
11	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
12	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
13	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
14	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
15	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
16	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
17	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
18	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
19	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
20	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
21	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
22	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
23	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
24	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
25	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
26	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
27	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
28	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
29	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
30	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
31	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
32	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
33	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
34	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
35	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
36	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
37	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
38	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
39	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
40	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
41	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
42	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
43	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
44	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
45	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
46	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
47	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
48	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
49	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
50	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
51	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
52	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
53	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
54	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
55	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
56	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	
57	Jan 1	7.00	7.00	7.00	7.00	7.00	7.00	

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Month Jan-Feb-Mar-Apr-May

SHEET 1

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Page 100, Line 10

THE UNIVERSITY OF CHICAGO

Date		Time	Location	Wind	Temp	Humidity	Pressure	Clouds	Remarks
May 1	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 2	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 3	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 4	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 5	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 6	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 7	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 8	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 9	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 10	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 11	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 12	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 13	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 14	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 15	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 16	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 17	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 18	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 19	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 20	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 21	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 22	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 23	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 24	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 25	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 26	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 27	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 28	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 29	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 30	5:30	5:30							Plasticity of soil 3 inches 5 and 10
May 31	5:30	5:30							Plasticity of soil 3 inches 5 and 10

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

Month June-July-Aug-Sept. , 1942

SHEET 2 OF 3 SHEET

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

PROJECT... Bethany, Missouri

Fig. 2. ΔT vs. ΔT_{max} .

[illegible]

Month Oct.- Nov.- Dec. 12 L²

Page: Bethany, Missouri

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

SHEET 3 OF 3 SHEET.

WATER-SEED Fe-1 & Fe-2

Storm No.	Date	Weather					Barometer					Temperature					Wind					Remarks	Continued or Withdrew
		Sky		Wind	Temp	Humid	Bar	Therm	Therm	Therm	Wind	Force	Direction	Wind	Force	Direction							
		Clouds	Wind																				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)				
96	Dec 3	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
97	3	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
98	3	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
99	4	Part	1.974	L	7.30A	225	.92	1.04	1.12	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
100	20	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
101	20	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
102	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
103	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
104	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
105	20	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
106	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
107	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
108	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
109	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
110	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
111	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
112	30	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
113	20-21	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
114	21	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
115	21	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
116	21-22	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
117	22-23	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
118	28	Part	2.074	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
119	Dec 5	Part	2.026	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
120	11	Part	2.026	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
121	5	Part	1.974	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
122	11	Part	1.974	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
123	Dec 21	Part	2.006	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
124	26	Part	2.006	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
125	27-28	Part	2.006	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
126	26	Part	1.974	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
127	26	Part	1.974	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
128	27-28	Part	1.974	L	7.30A	225	.92	1.04	1.10	.76	76	8.11A 12.00N	.91	.610	5.15A	.91	.000						
1942 TOTALS																							
Part-A 32.90																							
Part-C 32.90																							

GRAZING PAT.				
Jan. 1 1962 to Jan. 1 1963				
Grazing at 1.0 Acre				
TYPE OF				
KIND				
Cows	4	1/1	5/4	38
Calves	3	1/1	1/2	3
Calves	1	2/2	5/4	38
Cows	10	6/6	7/1	11
Calves	4	6/6	7/1	11
Cows	6	6/6	10/6	20
10.1 Units per acre.				TOTAL 176.5

GRAZING DATA				
Jan. 15 1962 to Jan. 1 1963				
Grazing Area 3,444 Acres				
LIVESTOCK	NUMBER	FEEDING PERIOD	FEEDING PERIOD	ANIMAL
TYPE			DATE	NO.
Cows	3	1/20	5/29	124
Calves	3	1/22	5/29	28.5
Cows	6	6/30	11	66
Calves	1	6/30	7/1	2.7
Cows	6	5/30	10/3	20
Cows	1	10/3	10/3	5
Calves	4	10/3	10/3	5
103.5 Units per Acre.				TOTAL 350.2

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

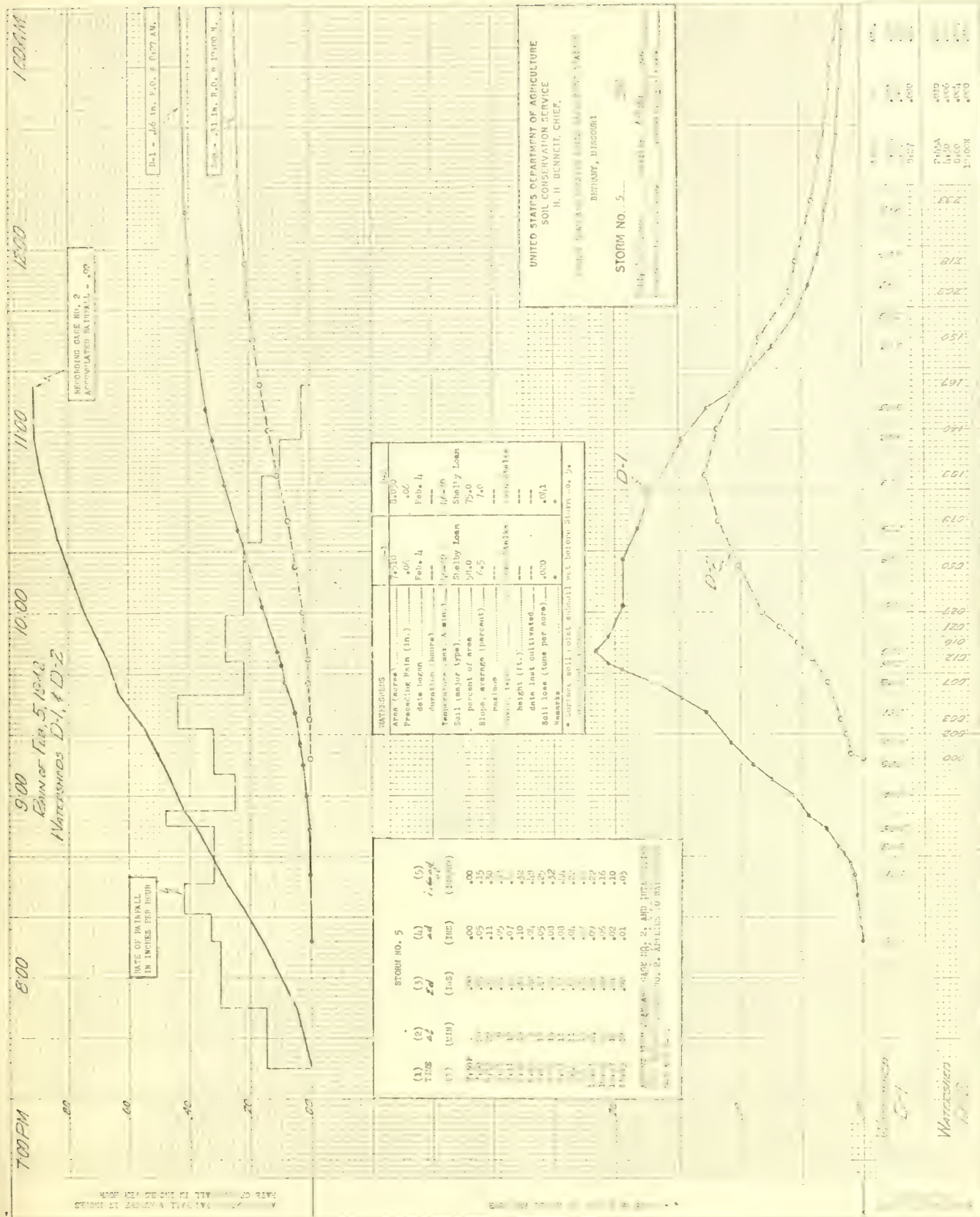
Monte San-Pedro-Aguila, 1912

RECORD OF SINGLE STORMS AND THEIR EFFECTS ON VALLEY WATERWAYS

NAME OF PLACE: Monte San-Pedro-Aguila

DATE: 1912

Storm No.	Date	Time	Wind	Direction	Force	Barometer	Thermometer	Relative Humidity	Amount of Rain	Direction of Wind	Direction of Rain	Direction of Runoff	Remarks
1	Jan. 1												
2	7												Blizzard. Ground frozen 3 to 5 inches deep.
3	Feb. 2												Pa-d, increased bluegrass pasture.
4	4												Pa-d, continued improved pasture.
5	5-6	Pa-A 2:02P	h	7:30P	225	.36	.11	.11	.31	10:02P 8:30A	.07	.021 11:10P	.079
5	5-6	Pa-C 1:37A	h	7:30P	225	.86	.11	.11	.31	8:30P 7:00A	.10	.035 10:20P	.076
6	8-9	Pa-A 2:02P	h			.15							Surface soil moist, about 1 inch before storm No. 5.
7	11	Pa-A 2:02P	h			.01							Frozen. Lowest bluegrass 2 to 3 inches high.
8	14	Pa-A 2:02P	h			.10							Runoff from melting snow and rain of storm No. 5 to 11 in. Soil estimated moderate.
9	14-15	Pa-A 2:02P	h			.10							determine amount of runoff.
10	15	Pa-A 2:02P	h	2:00P	200	.21	.10	.10	.32	9:00A			
11	16	Pa-A 2:02P	h			.04				9:00A	.58	.049 3:00P	.050
6	8-9	Pa-C 1:37A	h			.15							
7	11	Pa-C 1:37A	h			.01							
8	14	Pa-C 1:37A	h			.10							
9	14-15	Pa-C 1:37A	h			.10							
10	15	Pa-C 1:37A	h	2:00P	200	.21	.10	.10	.32	9:00A			
11	16	Pa-C 1:37A	h			.04				9:00A	.58	.049 3:00P	.050
12	22-23	Pa-A 2:02P	h			.18							
13	27	Pa-A 2:02P	h			.09							
12	27	Pa-C 1:37A	h			.10							
13	27	Pa-C 1:37A	h			.05							
14	Mar. 14					.04							
15	16	Pa-A 2:02P	h	6:05A	90	.15	.24	.16	.12				
16	16	Pa-A 2:02P	h	9:15A	285	.22	.50	.24	.20				
15	16	Pa-C 1:37A	h	6:05A	90	.15	.24	.16	.12	5:24A		.01	
16	16	Pa-C 1:37A	h	9:15A	285	.22	.50	.24	.20				
17	20					.04							
18	25	Pa-A 2:02P	h	6:35A	600	1.72	.72	.18	.14	11:15A 12:50A	.63	.172 4:25P	1.09
18	25	Pa-C 1:37A	h	6:35A	600	1.72	.72	.18	.14	10:45A 3:00A	1.01	.272 4:25P	.053
19	Apr. 2					.04							
20	6					.09							
21	13					.16	.24	.18	.18				
22	25					.10	.38	.12	.10				
23	25					.10	.38	.12	.10				
24	Apr. 25					.05	.50	.20	.14				
25	25					.12	.36	.20	.14				
26	27					.09	.74	.14	.14				
27	27					.12	.24	.20	.14				
28	30					.10	1.38	.58	.50				
29	May 2	Pa-A 2:02P	h			.05							
30	2	Pa-A 2:02P	h	4:10P	154	1.05	1.26	1.28	1.00	7:12P 5:00P		.015 7:12P	.05
31	2	Pa-A 2:02P	h	8:10P	30	.10	.24	.22	.16				
29	2	Pa-C 1:37A	h			.05							
30	2	Pa-C 1:37A	h	4:10P	154	1.05	1.50	1.28	1.00	5:37P		.05	
31	2	Pa-C 1:37A	h	8:10P	30	.10	.24	.22	.16	5:37P		.05	
32	5	Pa-A 2:02P	h	1:15P	30	.05	.24	.12	.27				
33	5	Pa-A 2:02P	h			.05	.24	.12	.27				
32	5	Pa-C 1:37A	h	12:10P	300	.09	2.16	1.12	.87	12:55P		.05	
33	5	Pa-C 1:37A	h			.02				12:10A	.07	.035 11:15P	.053
34	9	Pa-A 2:02P	h	11:10A	65	.17	.60	.32	.18				
35	9	Pa-A 2:02P	h	5:10P	18	.07	3.60	1.54	.84	5:15P 7:00P		.05	
36	10	Pa-A 2:02P	h			.04							
37	11	Pa-A 2:02P	h	3:15A	235	.20	.72	.28	.18	7:15A		.05	
34	9	Pa-C 1:37A	h	11:10A	65	.17	.60	.32	.18				
35	9	Pa-C 1:37A	h	5:10P	18	.07	3.60	1.54	.84	5:15P 7:00P		.05	
36	10	Pa-C 1:37A	h			.04							
37	11	Pa-C 1:37A	h	3:15A	235	.20	.72	.28	.18	7:15A		.05	
34	9	Pa-A 2:02P	h	11:10A	65	.17	.60	.32	.18				
35	9	Pa-A 2:02P	h	5:10P	18	.07	3.60	1.54	.84	5:15P 7:00P		.05	
36	10	Pa-A 2:02P	h			.04							
37	11	Pa-A 2:02P	h	3:15A	235	.20	.72	.28	.18	7:15A		.05	
34	9	Pa-C 1:37A	h	11:10A	65	.17	.60	.32	.18				
35	9	Pa-C 1:37A	h	5:10P	18	.07	3.60	1.54	.84	5:15P 7:00P		.05	
36	10	Pa-C 1:37A	h			.04							
37	11	Pa-C 1:37A	h	3:15A	235	.20	.72	.28	.18	7:15A		.05	
38	14					.17	.24	.14	.14				
39	17	Pa-A 2:02P	h	8:50A	105	.65	2.52	1.24	.72	3:30A		.02	
40	17	Pa-C 1:37A	h	8:50A	105	.65	2.52	1.24	.72	3:30P 2:50A	.05	.035 10:15P	.050
41	22					.09							
41	29	Pa-A 2:02P	h			.07							
42	29	Pa-A 2:02P	h	12:55A	15	.14	1.44	.64	.32				
41	29	Pa-C 1:37A	h			.09							
42	29	Pa-C 1:37A	h	12:55A	15	.14	1.44	.64	.32				
43	5/31-6/1	Pa-A 2:02P	h	5:10P	205	.70	1.72	1.08	.94	3:30A		.07	
43	5/31-6/1	Pa-C 1:37A	h	9:05P	205	.70	1.72	1.08	.90	3:30A		.01	



UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF.

IMOSIR, MISSOURI

STORM NO. 5

卷之八

Receivd of Mr. J. H. H. 5.10.17

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1



10. - .06 in. P.O. @ 9:00 AM. | Pa-C = .10 in. P.O. @ 7:00 AM.

$P_{\text{H}_2} = .07$ in. H₂O. @ 0.30 AM.

(1)	(2)	(3)	(4)	(5)
TIME	$\frac{d^2}{dt^2}$	$\frac{d^2}{dt^2}$	$\frac{d^2}{dt^2}$	$\frac{d^2}{dt^2}$
(*)	(MIN)	(DEG)	(IN)	(IN/IN)
TOP		.69	.60	.09
7452	39	.63	.53	.10
7453	37	.66	.62	.17
0112	20	.15	.09	.27
0120	16	.26	.11	.27
0130	12	.31	.09	.38
0151	11	.38	.07	.38
9145	24	.50	.12	.50
9156	25	.57	.10	.57
9156	25	.67	.09	.62
1007	23	.72	.06	.75
1030	24	.79	.07	.85
1048	18	.81	.05	.87
1115	27	.86	.02	.84

WA. STATION	1934	1935	1936
Area (acres)	14.71	14.71	14.71
Drainage Main (in.)	406	406	406
date begun	1916	1916	1916
duration (hours)	---	---	---
Temperature (max. & min.)	44-50	44-50	44-50
W. 1. major type	Shady loam	Shady loam	Shady loam
Percent of grain	63.5	63.5	63.5
Slips, average (percent)	9.5	9.5	9.5
medium	---	---	---
Coat, type	Bluegrass	Bluegrass	Bluegrass
height (ft.)	---	---	---
date last cultivated	---	---	---
Roll loss (cwt. per acre)	.000	.005	.000
Remarks	---	---	---
<p>* Harvest of Bluegrass 2 to 3 times light. ** Surface soil moist, subsoil wet before Storm No. 5. not frozen.</p>			

$\text{PA} = \text{PA} - \text{D} \cdot \text{A}^{(n)}$
 $\text{PA} = \text{PA} - \text{D} \cdot \text{A}^{(n)}$

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF.

DIETARY LOAM AND RELATED SOILS NUTRIMENT STATION
DETULY, MISSOURI

STORM NO.

2.2.2

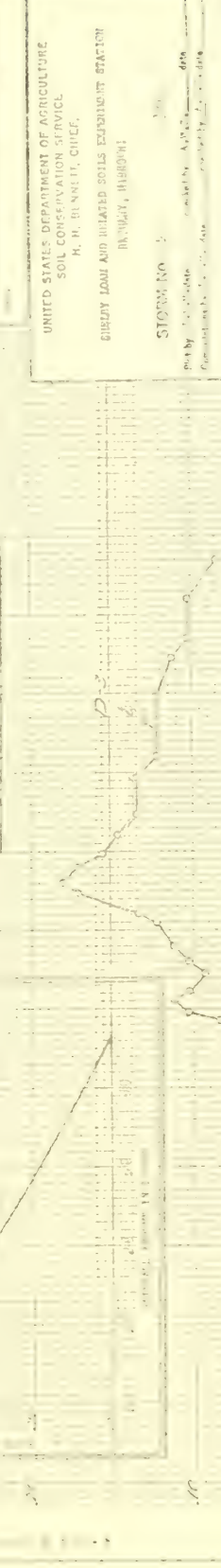
...

7:00 PM 8:00 9:00 11:00 12:00

DATE OF RAINFALL
IN INCHES PER HOUR



STATION NO. 5		(1)	(2)	(3)	(4)	(5)
		(in)	(mm)	(in)	(mm)	(in)
Area (acres)		7.50	20	4.00	100	1.00
Preceding Rain (in)		0.10	2.5	0.05	1.3	0.01
Ante-bloom		0.10	2.5	0.05	1.3	0.01
Duration (hours)		0.10	2.5	0.05	1.3	0.01
Temperature (air, & soil)		0.10	2.5	0.05	1.3	0.01
Soil (prior type)		0.10	2.5	0.05	1.3	0.01
Slope, average (percent)		0.10	2.5	0.05	1.3	0.01
Cover, type		0.10	2.5	0.05	1.3	0.01
Height (ft.)		0.10	2.5	0.05	1.3	0.01
Date last cultivated		0.10	2.5	0.05	1.3	0.01
Soil loss (tons per acre)		0.10	2.5	0.05	1.3	0.01



UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF
STATION NO. 5
STORM NO. 5
DATE OF RAINFALL
IN INCHES PER HOUR

1111

Box on Feb. 5, 1893.
Wilmington Feb. 11

LAPEL & LAFAYETTE
IN LACHES, 1864

ACCORDING PAGE 10, 5.

$$|J-1\rangle = |1\rangle \text{ in } H_0, \quad \theta \in [0, \Delta V,$$

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

... new mass attraction points, relief station

STORM NO. 5.....

... ..

100

11-11-1919

Continuity

七十一

542
Faint or Mammals, 2, 1842
Abundant in F. & F. 2.
1842

U.S. GOVERNMENT PRINTING OFFICE: 1967

THE UNIVERSITY OF CHICAGO

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF,
SHELBY LOAM AND RELATED SOILS EXPERIMENT STATION

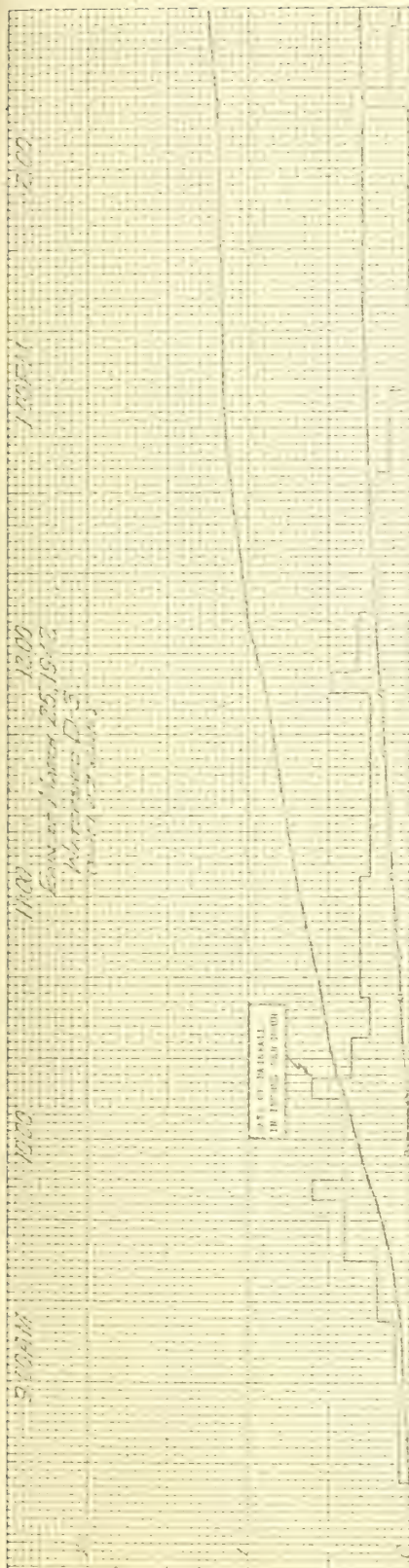
SHELFY LOAM AND RELATED SOILS EQUIVALENT LATION

or 0.015

For the \mathcal{L}_∞ norm, $\mathcal{L}_\infty(A) = \max_{i,j} |A_{ij}|$.

Consistency is by χ^2 test checked by χ^2 test

...



(1) TIME	(2) AM	(3) (MIN)	(4) (HRS)	(5) (HRS)	(6) STATION NO.	(7) DISTANCE	(8) ELEVATION	(9) SLOPE	(10) GRADE
10:00	10	10	10	10	10	10	10	10	10
10:15	15	15	15	15	15	15	15	15	15
10:30	30	30	30	30	30	30	30	30	30
10:45	45	45	45	45	45	45	45	45	45
11:00	00	00	00	00	00	00	00	00	00
11:15	15	15	15	15	15	15	15	15	15
11:30	30	30	30	30	30	30	30	30	30
11:45	45	45	45	45	45	45	45	45	45
12:00	00	00	00	00	00	00	00	00	00
12:15	15	15	15	15	15	15	15	15	15
12:30	30	30	30	30	30	30	30	30	30
12:45	45	45	45	45	45	45	45	45	45
13:00	00	00	00	00	00	00	00	00	00
13:15	15	15	15	15	15	15	15	15	15
13:30	30	30	30	30	30	30	30	30	30
13:45	45	45	45	45	45	45	45	45	45
14:00	00	00	00	00	00	00	00	00	00
14:15	15	15	15	15	15	15	15	15	15
14:30	30	30	30	30	30	30	30	30	30
14:45	45	45	45	45	45	45	45	45	45
15:00	00	00	00	00	00	00	00	00	00
15:15	15	15	15	15	15	15	15	15	15
15:30	30	30	30	30	30	30	30	30	30
15:45	45	45	45	45	45	45	45	45	45
16:00	00	00	00	00	00	00	00	00	00
16:15	15	15	15	15	15	15	15	15	15
16:30	30	30	30	30	30	30	30	30	30
16:45	45	45	45	45	45	45	45	45	45
17:00	00	00	00	00	00	00	00	00	00
17:15	15	15	15	15	15	15	15	15	15
17:30	30	30	30	30	30	30	30	30	30
17:45	45	45	45	45	45	45	45	45	45
18:00	00	00	00	00	00	00	00	00	00
18:15	15	15	15	15	15	15	15	15	15
18:30	30	30	30	30	30	30	30	30	30
18:45	45	45	45	45	45	45	45	45	45
19:00	00	00	00	00	00	00	00	00	00
19:15	15	15	15	15	15	15	15	15	15
19:30	30	30	30	30	30	30	30	30	30
19:45	45	45	45	45	45	45	45	45	45
20:00	00	00	00	00	00	00	00	00	00
20:15	15	15	15	15	15	15	15	15	15
20:30	30	30	30	30	30	30	30	30	30
20:45	45	45	45	45	45	45	45	45	45
21:00	00	00	00	00	00	00	00	00	00
21:15	15	15	15	15	15	15	15	15	15
21:30	30	30	30	30	30	30	30	30	30
21:45	45	45	45	45	45	45	45	45	45
22:00	00	00	00	00	00	00	00	00	00
22:15	15	15	15	15	15	15	15	15	15
22:30	30	30	30	30	30	30	30	30	30
22:45	45	45	45	45	45	45	45	45	45
23:00	00	00	00	00	00	00	00	00	00
23:15	15	15	15	15	15	15	15	15	15
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23:45	45	45	45	45	45	45	45	45	45
24:00	00	00	00	00	00	00	00	00	00

ADJUSTED FROM ST. 1000, NO. 2 AND INTERSECTION
FROM RECORDING PAGE NO. 2. ALLIERS TO ELIEN-
VILLE

DATE OF RAINFALL IN INCHES PER HOUR

RECORDING GAUGE NO. 2
ACCUMULATED RAINFALL - 1.77

2.5 - 7.4 in. R.O. at 9.35 AM.

Barometric Pressure (in.)	30.0
Barometric Pressure (mm.)	760
Temperature (max. & min.)	52
Soil (water temp.)	52
Moisture (percent of area)	75
Slope, average (percent)	10
Aspect	North
Height (ft.)	100
Wind (direction & force)	10
Clouds (percent)	10
Relative Humidity (percent)	10
Time of day	10
Remarks	10

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF
BUDGET LOAN AND RELATED SOILS INVESTMENT SERVICE
BETHANY, MONTGOMERY

DATE	10/10/50
TIME	10:00
LOCATION	100
REMARKS	10

8 - 1000 / 1000000

1210

RAIN or WIND 25, 1912.

Wanderlust 1834-1835

1891

ACCOMPLISHED BY THE
 1.00

Rate of Pay Fall
in Twelve Per Hour

THIS COPY OF THE REPORT IS BEING FORWARDED TO THE
BUREAU OF THE ARMY FOR INFORMATION.

[illegible]

STORM NO. 30

DATE OF STORM NO. 30

STORM NO. 30

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF

STORM NO. 30 & 31

Plotted by J. J. M. date checked by A. H. M. date
Computation by J. J. M. date checked by A. H. M. date

STATION	IN-A	IN-B	IN-C
Area (acres)	2.000	5.500	1.000
Preceding Pains (In.)	40	40	40
date begun	May 2	May 2	May 2
Coverage (hours)	62-15	62-15	62-15
Temperature (max. & min.)	Shelby Loan	Shelby Loan	Shelby Loan
Roll (major type)	92-6	64-5	54-7
Percent of area	13.0	9.5	11.0
Slope, average (percent)	---	---	---
Soil type	Bluegrass	Bluegrass	Bluegrass
Cover, type	2 inches	2 inches	2 inches
date last cultivated	---	---	---
Roll loss (tons per acre)	Trace	Trace	Trace
Measure	Trace	Trace	Trace
Roll moist before storm no. 30	---	---	---

Roll moist before storm no. 30

(1)	(2)	(3)	(4)	(5)	(6)
Time	at	2d	3d	4d	5d
(1)	0	0	0	0	0
(2)	1	1	1	1	1
(3)	2	2	2	2	2
(4)	3	3	3	3	3
(5)	4	4	4	4	4
(6)	5	5	5	5	5
(7)	6	6	6	6	6
(8)	7	7	7	7	7
(9)	8	8	8	8	8
(10)	9	9	9	9	9
(11)	10	10	10	10	10
(12)	11	11	11	11	11
(13)	12	12	12	12	12
(14)	13	13	13	13	13
(15)	14	14	14	14	14
(16)	15	15	15	15	15
(17)	16	16	16	16	16
(18)	17	17	17	17	17
(19)	18	18	18	18	18
(20)	19	19	19	19	19
(21)	20	20	20	20	20
(22)	21	21	21	21	21
(23)	22	22	22	22	22
(24)	23	23	23	23	23
(25)	24	24	24	24	24
(26)	25	25	25	25	25
(27)	26	26	26	26	26
(28)	27	27	27	27	27
(29)	28	28	28	28	28
(30)	29	29	29	29	29
(31)	30	30	30	30	30
(32)	31	31	31	31	31
(33)	32	32	32	32	32
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(131)	130	130	130	130	130
(132)	131	131	131	131	131
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(134)	133	133	133	133	133
(135)	134	134	134	134	134
(136)	135	135	135	135	135
(137)	136	136	136	136	136
(138)	137	137	137	137	137
(139)	138	138	138	138	138
(140)	139	139	139	139	139
(141)	140	140	140	140	140
(142)	141	141	141	141	141
(143)	142	142	142	142	142
(144)	143	143	143	143	143
(145)	144	144	144	144	144
(146)	145	145	145	145	145
(147)	146	146	146	146	146
(148)	147	147	147	147	147
(149)	148	148	148	148	148
(150)	149	149	149	149	149
(151)	150	150	150	150	150
(152)	151	151	151	151	151
(153)	152	152	152	152	152
(154)	153	153	153	153	153
(155)	154	154	154	154	154
(156)	155	155	155	155	155
(157)	156	156	156	156	156
(158)	157	157	157	157	157
(159)	158	158	158	158	158
(160)	159	159	159	159	159
(161)	160	160	160	160	160
(162)	161	161	161	161	161
(163)	162	162	162	162	162
(164)	163	163	163	163	163
(165)	164	164	164	164	164
(166)	165	165	165	165	165
(167)	166	166	166	166	166
(168)	167	167	167	167	167
(169)	168	168	168	168	168
(170)	169	169	169	169	169
(171)	170	170	170	170	170
(172)	171	171	171	171	171
(173)	172	172	172	172	172
(174)	173	173	173	173	173
(175)	174	174	174	174	174
(176)	175	175	175	175	175
(177)	176	176	176	176	176
(178)	177	177	177	177	177
(179)	178	178	178	178	178
(180)	179	179	179	179	179
(181)	180	180	180	180	180
(182)	181	181	181	181	181
(183)	182	182	182	182	182
(184)	183	183	183	183	183
(185)	184	184	184	184	184
(186)	185	185	185	185	185
(187)	186	186	186	186	186
(188)	187	187	187	187	187
(189)	188	188	188	188	188
(190)	189	189	189	189	189
(191)	190	190	190	190	190
(192)	191	191	191	191	191
(193)	192	192	192	192	192
(194)	193	193	193	193	193
(195)	194	194	194	194	194
(196)	195	195	195	195	195
(197)	196	196	196	196	196
(198)	197	197	197	197	197
(199)	198	198	198	198	198
(200)	199	199	199	199	199
(201)	200	200	200	200	200
(202)	201	201	201	201	201
(203)	202	202	202	202	202
(204)	203	203	203	203	203
(205)	204	204	204	204	204
(206)	205	205	205	205	205
(207)	206	206	206	206	206
(208)	207	207	207	207	207
(209)	208	208	208	208	208
(210)	209	209	209	209	209
(211)	210	210	210	210	210
(212)	211	211	211	211	211
(213)	212	212	212	212	212
(214)	213	213	213	213	213
(215)	214	214	214	214	214
(216)	215	215	215	215	215
(217)	216	216	216	216	216
(218)	217	217	217	217	217
(219)	218	218	218	218	218
(220)	219	219	219	219	219
(221)	220	220	220	220	220
(222)	221	221	221	221	221
(223)	222	222	222	222	222
(224)	223	223	223	223	223
(225)	224	224	224	224	224
(226)	225	225	225	225	225
(227)	226	226	226	226	226
(228)	227	227	227	227	227
(229)	228	228	228	228	228
(230)	229	229	229	229	229
(231)	230	230	230	230	230
(232)	231	231	231	231	231
(233)	232	232	232	232	232
(234)	233	233	233	233	233
(235)	234	234	234	234	234
(236)	235	235	235	235	235
(237)	236	236	236	236	236
(238)	237	237	237	237	237
(239)	238	238	238	238	238
(240)	239	239	239	239	239
(241)	240	240	240	240	240
(242)	241	241	241	241	241
(243)	242	242	242	242	242
(244)	243	243	243	243	243
(245)	244	244	244	244	244
(246)	245	245	245	245	245
(247)	246	246	246	246	246
(248)	247	247	247	247	247
(249)	248	248	248	248	248
(250)</					

5:00 PM

0.00

1.00

0.00

0.00

0.00

Run at High 5/12/12
Watershed D-152

APPROXIMATE RAINFALL IN INCHES PER HOUR

RATE OF RAINFALL
IN INCHES PER HOUR

RECORDED DATA NO. 2
ACCUMULATED RAINFALL - 1.10

D-1 - 31 in. R.O. @ 11.05 in

D-2 - 2.10 in R.O. @ 2.90 in

DATE	May 2
Time (hours)	7:00
Preceding rain (in.)	.05
Date began	May 2
Duration (hours)	---
Temperature (max. & min.)	62 - 45
Soil (major type)	Shaly Loam
Percent of area	50.0
Moisture (percent)	6.5
Surface	Grass
Height (ft.)	10.5
Date last cultivated	2-2-0
Soil loss (tons per acre)	1.1
Remarks	---
Not used before storm No. 31 and 32.	

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF,
STORM NO. 20 & 31
RECEIVED
May 2
Plotted by J. E. M. date
Computed by J. E. M. date

(1)	(2)	(3)	(4)	(5)	(6)
TIME	at	2d	add	total	total
(hr)	(min)	(min)	(min)	(min)	(inches)
4:00	0	0	0	0	0.00
4:15	4	0	0	4	0.00
4:30	8	0	0	8	0.00
4:45	12	0	0	12	0.00
5:00	16	0	0	16	0.00
5:15	20	0	0	20	0.00
5:30	24	0	0	24	0.00
5:45	28	0	0	28	0.00
6:00	32	0	0	32	0.00
6:15	36	0	0	36	0.00
6:30	40	0	0	40	0.00
6:45	44	0	0	44	0.00
7:00	48	0	0	48	0.00
7:15	52	0	0	52	0.00
7:30	56	0	0	56	0.00
7:45	60	0	0	60	0.00
8:00	64	0	0	64	0.00
8:15	68	0	0	68	0.00
8:30	72	0	0	72	0.00
8:45	76	0	0	76	0.00
9:00	80	0	0	80	0.00
9:15	84	0	0	84	0.00
9:30	88	0	0	88	0.00
9:45	92	0	0	92	0.00
10:00	96	0	0	96	0.00
10:15	100	0	0	100	0.00
10:30	104	0	0	104	0.00
10:45	108	0	0	108	0.00
11:00	112	0	0	112	0.00
11:15	116	0	0	116	0.00
11:30	120	0	0	120	0.00
11:45	124	0	0	124	0.00
12:00	128	0	0	128	0.00
12:15	132	0	0	132	0.00
12:30	136	0	0	136	0.00
12:45	140	0	0	140	0.00
13:00	144	0	0	144	0.00
13:15	148	0	0	148	0.00
13:30	152	0	0	152	0.00
13:45	156	0	0	156	0.00
14:00	160	0	0	160	0.00
14:15	164	0	0	164	0.00
14:30	168	0	0	168	0.00
14:45	172	0	0	172	0.00
15:00	176	0	0	176	0.00
15:15	180	0	0	180	0.00
15:30	184	0	0	184	0.00
15:45	188	0	0	188	0.00
16:00	192	0	0	192	0.00
16:15	196	0	0	196	0.00
16:30	200	0	0	200	0.00
16:45	204	0	0	204	0.00
17:00	208	0	0	208	0.00
17:15	212	0	0	212	0.00
17:30	216	0	0	216	0.00
17:45	220	0	0	220	0.00
18:00	224	0	0	224	0.00
18:15	228	0	0	228	0.00
18:30	232	0	0	232	0.00
18:45	236	0	0	236	0.00
19:00	240	0	0	240	0.00
19:15	244	0	0	244	0.00
19:30	248	0	0	248	0.00
19:45	252	0	0	252	0.00
20:00	256	0	0	256	0.00
20:15	260	0	0	260	0.00
20:30	264	0	0	264	0.00
20:45	268	0	0	268	0.00
21:00	272	0	0	272	0.00
21:15	276	0	0	276	0.00
21:30	280	0	0	280	0.00
21:45	284	0	0	284	0.00
22:00	288	0	0	288	0.00
22:15	292	0	0	292	0.00
22:30	296	0	0	296	0.00
22:45	300	0	0	300	0.00
23:00	304	0	0	304	0.00
23:15	308	0	0	308	0.00
23:30	312	0	0	312	0.00
23:45	316	0	0	316	0.00
24:00	320	0	0	320	0.00

• 10% STD. NO. 6 + 60% STD. NO. 9 - APPLIED TO D-1
• 20% STD. NO. 2 + 80% STD. NO. 9 - APPLIED TO D-2

5400

0290

7100

5200

0200

0200

Run on Apr 22, 1942
Missouri C-3

DATE OF RAINFALL
IN INCHES PER HOUR

ACCUMULATED RAINFALL - 1.10

D-3 - 40 in. R.O. @ 7.50 in.

RAINFALL AMOUNT OVER AND
BELOW THE INDICATED AMOUNT

0.3 53.70 0.45 12

EXCLUDED

Area (acres) 4.405

Precipitating Rain (in.) 0.9

Date, hour 7:50

Duration (hours) 1.5

Temperature (max. & min.)

Soil (major type)

Moisture, average (percent) 6.7

Moisture, maximum (percent) 9.5

Soil type 3 - 1.5

Soil depth (ft.) 8

Date last soil treated

Soil time (time per acre)

Remarks

• Soil water before storm No. 70.

(1) Time (hr)	(2) at (hr)	(3) Zd (in)	(4) i, eqad (in/hr)	(5) i, eqad (in/hr)	(6) i, eqad (in/hr)
1.00	0	0.00	0.00	0.00	0.00
1.05	1	0.01	0.01	0.01	0.01
1.10	2	0.02	0.02	0.02	0.02
1.15	3	0.03	0.03	0.03	0.03
1.20	4	0.04	0.04	0.04	0.04
1.25	5	0.05	0.05	0.05	0.05
1.30	6	0.06	0.06	0.06	0.06
1.35	7	0.07	0.07	0.07	0.07
1.40	8	0.08	0.08	0.08	0.08
1.45	9	0.09	0.09	0.09	0.09
1.50	10	0.10	0.10	0.10	0.10
1.55	11	0.11	0.11	0.11	0.11
1.60	12	0.12	0.12	0.12	0.12
1.65	13	0.13	0.13	0.13	0.13
1.70	14	0.14	0.14	0.14	0.14
1.75	15	0.15	0.15	0.15	0.15
1.80	16	0.16	0.16	0.16	0.16
1.85	17	0.17	0.17	0.17	0.17
1.90	18	0.18	0.18	0.18	0.18
1.95	19	0.19	0.19	0.19	0.19
2.00	20	0.20	0.20	0.20	0.20
2.05	21	0.21	0.21	0.21	0.21
2.10	22	0.22	0.22	0.22	0.22
2.15	23	0.23	0.23	0.23	0.23
2.20	24	0.24	0.24	0.24	0.24
2.25	25	0.25	0.25	0.25	0.25
2.30	26	0.26	0.26	0.26	0.26
2.35	27	0.27	0.27	0.27	0.27
2.40	28	0.28	0.28	0.28	0.28
2.45	29	0.29	0.29	0.29	0.29
2.50	30	0.30	0.30	0.30	0.30
2.55	31	0.31	0.31	0.31	0.31
2.60	32	0.32	0.32	0.32	0.32
2.65	33	0.33	0.33	0.33	0.33
2.70	34	0.34	0.34	0.34	0.34
2.75	35	0.35	0.35	0.35	0.35
2.80	36	0.36	0.36	0.36	0.36
2.85	37	0.37	0.37	0.37	0.37
2.90	38	0.38	0.38	0.38	0.38
2.95	39	0.39	0.39	0.39	0.39
3.00	40	0.40	0.40	0.40	0.40
3.05	41	0.41	0.41	0.41	0.41
3.10	42	0.42	0.42	0.42	0.42
3.15	43	0.43	0.43	0.43	0.43
3.20	44	0.44	0.44	0.44	0.44
3.25	45	0.45	0.45	0.45	0.45
3.30	46	0.46	0.46	0.46	0.46
3.35	47	0.47	0.47	0.47	0.47
3.40	48	0.48	0.48	0.48	0.48
3.45	49	0.49	0.49	0.49	0.49
3.50	50	0.50	0.50	0.50	0.50
3.55	51	0.51	0.51	0.51	0.51
3.60	52	0.52	0.52	0.52	0.52
3.65	53	0.53	0.53	0.53	0.53
3.70	54	0.54	0.54	0.54	0.54
3.75	55	0.55	0.55	0.55	0.55
3.80	56	0.56	0.56	0.56	0.56
3.85	57	0.57	0.57	0.57	0.57
3.90	58	0.58	0.58	0.58	0.58
3.95	59	0.59	0.59	0.59	0.59
4.00	60	0.60	0.60	0.60	0.60
4.05	61	0.61	0.61	0.61	0.61
4.10	62	0.62	0.62	0.62	0.62
4.15	63	0.63	0.63	0.63	0.63
4.20	64	0.64	0.64	0.64	0.64
4.25	65	0.65	0.65	0.65	0.65
4.30	66	0.66	0.66	0.66	0.66
4.35	67	0.67	0.67	0.67	0.67
4.40	68	0.68	0.68	0.68	0.68
4.45	69	0.69	0.69	0.69	0.69
4.50	70	0.70	0.70	0.70	0.70
4.55	71	0.71	0.71	0.71	0.71
4.60	72	0.72	0.72	0.72	0.72
4.65	73	0.73	0.73	0.73	0.73
4.70	74	0.74	0.74	0.74	0.74
4.75	75	0.75	0.75	0.75	0.75
4.80	76	0.76	0.76	0.76	0.76
4.85	77	0.77	0.77	0.77	0.77
4.90	78	0.78	0.78	0.78	0.78
4.95	79	0.79	0.79	0.79	0.79
5.00	80	0.80	0.80	0.80	0.80
5.05	81	0.81	0.81	0.81	0.81
5.10	82	0.82	0.82	0.82	0.82
5.15	83	0.83	0.83	0.83	0.83
5.20	84	0.84	0.84	0.84	0.84
5.25	85	0.85	0.85	0.85	0.85
5.30	86	0.86	0.86	0.86	0.86
5.35	87	0.87	0.87	0.87	0.87
5.40	88	0.88	0.88	0.88	0.88
5.45	89	0.89	0.89	0.89	0.89
5.50	90	0.90	0.90	0.90	0.90
5.55	91	0.91	0.91	0.91	0.91
5.60	92	0.92	0.92	0.92	0.92
5.65	93	0.93	0.93	0.93	0.93
5.70	94	0.94	0.94	0.94	0.94
5.75	95	0.95	0.95	0.95	0.95
5.80	96	0.96	0.96	0.96	0.96
5.85	97	0.97	0.97	0.97	0.97
5.90	98	0.98	0.98	0.98	0.98
5.95	99	0.99	0.99	0.99	0.99
6.00	100	1.00	1.00	1.00	1.00

AVERAGE OF STD. QUANT. 2 & 10 - APPLIES TO D-5

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF

STATION NO. 20, 21

STATION NO. 20, 21

423

1. 10. 10

1861

[illegible][illegible]

AMOUNT FROM STD. DATE TO. 5 - ATTENDING TO 1-50 & 12-1

JOHN J. MURPHY JR. 1815-1880

SUPPLY LOAN AND RELATED COILS MINING UNIT STATION

STORIA NO. 32. A 33

1900

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0 - PAGE 17, ENCLAVE IN INDEXES FOR 80129

100 PM
100 PM

200

300

400
From 1st May 1942
Hawthorne D.H.D.

500

600

DATE OF RAINFALL
IN HOURS PER HOUR

STATION NO. 2

APPROXIMATE RAINFALL IN HOURS PER HOUR

STATION	1st	2nd
Area (sq. ft.)	7,010	6,010
Perching rain (in.)	1.15	1.15
Date begun	May 2	May 2
Duration (hours)	230 min.	230 min.
Temperature (max. & min.)	59 - 65	59 - 65
Soil (moist. type)	80% dry loam	80% dry loam
Percent of area	90.0	70.0
Slope, average (percent)	6.5	7.0
Notes	—	—
Comer, type	—	—
Soil (ft.)	3 - 4 in.	3 - 4 in.
Soil loss (tons per acre)	—	—
Remarks	—	—

(1)	(2)	(3)	(4)	(5)	(6)
TIME	(min)	(sec)	(min)	(sec)	(min)
12:00 PM	0	00	00	00	00
12:01	2	00	00	00	00
12:02	2	00	00	00	00
12:03	2	00	00	00	00
12:04	2	00	00	00	00
12:05	2	00	00	00	00
12:06	2	00	00	00	00
12:07	2	00	00	00	00
12:08	2	00	00	00	00
12:09	2	00	00	00	00
12:10	2	00	00	00	00
12:11	2	00	00	00	00
12:12	2	00	00	00	00
12:13	2	00	00	00	00
12:14	2	00	00	00	00
12:15	2	00	00	00	00
12:16	2	00	00	00	00
12:17	2	00	00	00	00
12:18	2	00	00	00	00
12:19	2	00	00	00	00
12:20	2	00	00	00	00
12:21	2	00	00	00	00
12:22	2	00	00	00	00
12:23	2	00	00	00	00
12:24	2	00	00	00	00
12:25	2	00	00	00	00
12:26	2	00	00	00	00
12:27	2	00	00	00	00
12:28	2	00	00	00	00
12:29	2	00	00	00	00
12:30	2	00	00	00	00

2 HOURS TO 6:00 PM

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
N. H. BENNETT, CHIEF
STUDY DAM AND FLOOD BASIN STUDENT REPORT

STATION NO. 23

DATE OF RAINFALL IN HOURS PER HOUR

STATION NO. 23

DATE OF RAINFALL IN HOURS PER HOUR

STATION NO. 23

DATE OF RAINFALL IN HOURS PER HOUR

STATION NO. 23

DATE OF RAINFALL IN HOURS PER HOUR

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STATION NO. 23

DATE OF RAINFALL IN HOURS PER HOUR

STATION NO. 23

DATE OF RAINFALL IN HOURS PER HOUR

STATION NO. 23

DATE OF RAINFALL IN HOURS PER HOUR



Area (acres) 4.2105
 Precipitating rain (in.) 1.10
 Date begun May 2
 Duration (hours) 235 min.
 Temperature (max. & min.) 99 - 45
 Soil (major type) Shaly loam
 Percent of area 72.5
 Slope, average (percent) 6.27
 Slope, type —
 Height (ft.) 5 - 4 ft.
 Date last cultivated Apr. 6
 Soil loss (tons per acre) 6.355
 Remarks —

1. Soil wet before storm No. 32.

(1)	(2)	(3)	(4)	(5)	(6)
TIME	At	(MIN)	(HRS)	(MIN)	(HRS)
10:00 AM	0	0	0	0	0
10:15	1	1	1	1	1
10:30	2	2	2	2	2
10:45	3	3	3	3	3
11:00	4	4	4	4	4
11:15	5	5	5	5	5
11:30	6	6	6	6	6
11:45	7	7	7	7	7
12:00	8	8	8	8	8
12:15	9	9	9	9	9
12:30	10	10	10	10	10
12:45	11	11	11	11	11
1:00	12	12	12	12	12
1:15	13	13	13	13	13
1:30	14	14	14	14	14
1:45	15	15	15	15	15
2:00	16	16	16	16	16
2:15	17	17	17	17	17
2:30	18	18	18	18	18
2:45	19	19	19	19	19
3:00	20	20	20	20	20
3:15	21	21	21	21	21
3:30	22	22	22	22	22
3:45	23	23	23	23	23
4:00	24	24	24	24	24
4:15	25	25	25	25	25
4:30	26	26	26	26	26
4:45	27	27	27	27	27
5:00	28	28	28	28	28
5:15	29	29	29	29	29
5:30	30	30	30	30	30
5:45	31	31	31	31	31
6:00	32	32	32	32	32

• AVERAGE OF INT. POINTS 2 & 10 - APPLIES TO D-3

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF

SUBJECT LOAM AND RELATED SOILS INTERPRETATION SECTION

STORM NO. 32
 Date by L.H. Hays checked by A.M. Hays
 Completed by L.H. Hays checked by A.M. Hays

Feature A = .01 inches runoff. Max. rate = .02 @ 1:15 PM
 Feature B = .02 inches runoff. Max. rate = .04 @ 1:15 PM
 Feature C = .07 inches runoff. Max. rate = .04 @ 1:15 PM

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[illegible]

- Oats 4 in. high leaved 1 in. high. Grass in waterways 10 in. high.
- Strip A - Oats 2-3 in. high, Strip D - rough plowed ground, Strip O - Clover 12 in. high.
- Soil wet before storm. No. 52

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
TIME	AGE	SEX	WEIGHT	LENGTH	WING	TAIL	WING	TAIL	WING	TAIL	WING
(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
10:00 AM	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10:05	1	1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
10:10	2	2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
10:15	3	3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
10:20	4	4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
10:25	5	5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
10:30	6	6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
10:35	7	7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
10:40	8	8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
10:45	9	9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
10:50	10	10	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
10:55	11	11	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
11:00	12	12	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
11:05	13	13	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
11:10	14	14	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4
11:15	15	15	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
11:20	16	16	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
11:25	17	17	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
11:30	18	18	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8
11:35	19	19	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9
11:40	20	20	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
11:45	21	21	21.1	21.1							

• AMOUNT FROM STD. QUOTE NO. 5 - APPLICABLE TO I-50 & IJ-1

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. W. BENNETT, CHIEF,

CLIFFY LOAM AND PLATED SOILS INTERVIEW STATION
PRIMA, MISSOURI

STORM NO. 32...

not by ... data
computations by ...

5:00 PM 6:00

7:00 8:00

9:00

Run on May 8, 1947.
Watersheds F. H. 1947

DATE OF RAINFALL
IN INCHES PER HOUR

DATE OF RAINFALL
IN INCHES PER HOUR

Under top soil to 10 ft. cumulatively
P₁₀₀ = 1.0 in. R.O. @ 1:00 PM
P₅₀ = 0.1 in. R.O. @ 7:33 PM
P₁₀ = 0.06 in. R.O. @ 11:05 PM

Measurements	P ₁₀₀	P ₅₀	P ₁₀	P ₁
Area (acres)	2.076	5.263	1.076	0.076
Freezing P. in (in.)	0.17	0.17	0.17	0.17
Date begun	May 9	May 9	May 9	May 9
Duration (hours)	65 min.	65 min.	65 min.	65 min.
Temperature (max. & min.)	71 - 10	71 - 10	71 - 10	71 - 10
Soil (major type)	Shaly Loam	Shaly Loam	Shaly Loam	Shaly Loam
Percent of area	95.6	95.6	95.6	95.6
Slope, average (percent)	13.0	13.0	13.0	13.0
Drainage	Bluegrass	Bluegrass	Bluegrass	Bluegrass
Over, type	1 - 5 in.	2 - 5 in.	1 - 5 in.	1 - 5 in.
Height (ft.)	—	—	—	—
Date last cultivated	—	—	—	—
Cell loss (loss per acre)	—	—	—	—
Remarks	Topsoil	Topsoil	Topsoil	Topsoil

Soil moist before storm No. 35.
• Soil Temp from bottom 2 in. at 7:33 PM

(1)	(2)	(3)	(4)	(5)	(6)
INCH	AT	INCH	INCH	INCH	INCH
STORM NO. 35	0	0.00	0.00	0.00	0.00
5:00 PM	0	0.00	0.00	0.00	0.00
5:01	0	0.00	0.00	0.00	0.00
5:02	0	0.00	0.00	0.00	0.00
5:03	0	0.00	0.00	0.00	0.00
5:04	0	0.00	0.00	0.00	0.00
5:05	0	0.00	0.00	0.00	0.00
5:06	0	0.00	0.00	0.00	0.00
5:07	0	0.00	0.00	0.00	0.00
5:08	0	0.00	0.00	0.00	0.00
5:09	0	0.00	0.00	0.00	0.00
5:10	0	0.00	0.00	0.00	0.00
5:11	0	0.00	0.00	0.00	0.00
5:12	0	0.00	0.00	0.00	0.00
5:13	0	0.00	0.00	0.00	0.00
5:14	0	0.00	0.00	0.00	0.00
5:15	0	0.00	0.00	0.00	0.00
5:16	0	0.00	0.00	0.00	0.00
5:17	0	0.00	0.00	0.00	0.00

• AMOUNT FROM STD. DATE NO. 4 - AFFLIES TO P₁₀₀ & P₅₀
• AT 5:00 PM P₁₀₀ 0.00, P₅₀ 0.00, P₁₀ 0.00, P₁ 0.00

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF

STATION NO. 35

STATION NO. 35

DATE OF RAINFALL
IN INCHES PER HOUR

66 • TRAVEL • 57

THE UNIVERSITY OF CHICAGO

DATE PLANTED	D-1	D-2
Area (square)	1,500	1,500
Transpiring area (sq.)	112	126
Days to open	79.9	79.9
Duration (hours)	65 min.	70 min.
Temperature (air, & soil)	71 - 45	71 - 48
Soil (soil type)	loamy loam	loamy loam
percent of area	55.0	55.0
Slope, average (percent)	6.5	7.0
Wind	7.0	7.0
Clouds, %	0.0	0.0
Sunlight (hr.)	3 - 5 hrs.	3 - 5 hrs.
date last collected	---	---
Roll loss (tons per acre)	4.5/100	4.5/100
Notes	---	---

(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\Delta H_{\text{cal}}^{\circ}$	T°	ΔG°	ΔS°	ΔC_p°	ΔC_p°	ΔC_p°
10.0	298.15	10.0	0.0	0.0	0.0	0.0
10.0	300.0	9.8	0.2	0.0	0.0	0.0
10.0	310.0	9.2	0.8	0.0	0.0	0.0
10.0	320.0	8.4	1.6	0.0	0.0	0.0
10.0	330.0	7.4	2.6	0.0	0.0	0.0
10.0	340.0	6.2	3.8	0.0	0.0	0.0
10.0	350.0	4.8	5.2	0.0	0.0	0.0
10.0	360.0	3.2	6.8	0.0	0.0	0.0
10.0	370.0	1.4	8.6	0.0	0.0	0.0
10.0	380.0	-0.6	10.6	0.0	0.0	0.0
10.0	390.0	-2.8	12.8	0.0	0.0	0.0
10.0	400.0	-5.0	15.0	0.0	0.0	0.0
10.0	410.0	-7.2	17.2	0.0	0.0	0.0
10.0	420.0	-9.4	19.4	0.0	0.0	0.0
10.0	430.0	-11.6	21.6	0.0	0.0	0.0
10.0	440.0	-13.8	23.8	0.0	0.0	0.0
10.0	450.0	-16.0	26.0	0.0	0.0	0.0
10.0	460.0	-18.2	28.2	0.0	0.0	0.0
10.0	470.0	-20.4	30.4	0.0	0.0	0.0
10.0	480.0	-22.6	32.6	0.0	0.0	0.0
10.0	490.0	-24.8	34.8	0.0	0.0	0.0
10.0	500.0	-27.0	37.0	0.0	0.0	0.0

[illegible]

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. DENNETT, CHIEF.

THE UNIVERSITY OF CHICAGO

STORY NO. 35

Platz bei 9. u. 11. A. 10.

4

Calculations by T_{20}^{10} Method

$$\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |\nabla u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = \int_{\mathbb{R}^n} u \left(-\frac{1}{2} \Delta u^2 \right) dx = \frac{1}{4} \frac{d}{dt} \int_{\mathbb{R}^n} |\nabla u|^2 dx$$

2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2818 2819 2820 2821 2822 2823 2824 2825 2826 2827 2828 2829 2830 2831 2832

5. ACCUMULATED RAINFALL - 5.5

$$1, 2, \dots, n-1$$
$$1, 2, \dots, n-1$$

Boil moist before stove No. 55.
Oats 5-6 inches high, 10-12 in. high. Grass in water.
13-14 inches high.
Strip A - Oats 5-6 in. high. B - Dough placed cross, 11 - 12 in.
17-18 inches high.

Boil moist before stove No. 55.
Oats 5-6 inches high, 10-12 in. high. Grass in water.
13-14 inches high.
Strip A - Oats 5-6 in. high. B - Dough placed cross, 11 - 12 in.
17-18 inches high.

[illegible]

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. SWEET, CHIEF,
STRAWY LOAM AND RELATED SOILS EXPERIMENT STATION

DEPART. YELLOW.

STORY NO. 35

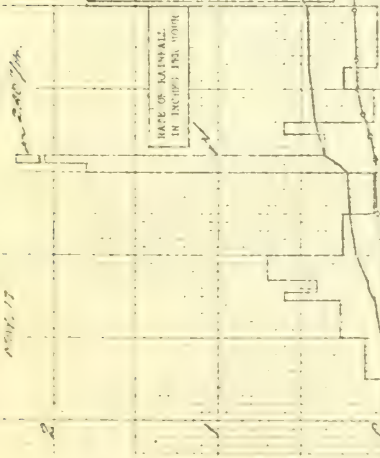
Part by $\frac{1}{2} \times 7 \frac{1}{2}$ lbs. date _____ checked by Δy 1892 _____ date _____
 Concentrations by Δy 1892 _____ date _____ checked by Δy 1892 _____ date _____

9:00 PM
May 17

11:00
Even of May 17 1966
WATERGARD D-3

2:00

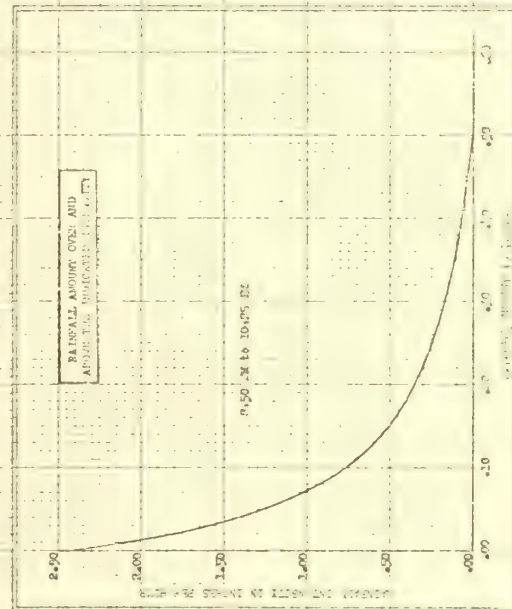
DATE OF RAINFALL IN DASHES PER HOUR



RATE OF RAINFALL
IN INCHES PER HOUR

RECORDING GAGE NO. 2
FOUNTAIN PARK, MO.

1.5 - 2.7 in. R.O. at 11:00 AM



RAINFALL AMOUNT CURVE AND
AVERAGE TIME OF RAINFALL

D-3

WATERGARD
D-3

Station A - 402 inches runoff, Max. rate - 407 @ 10:05 PM
Station B - 405 inches runoff, Max. rate - 407 @ 10:05 PM
Station C - 405 inches runoff, Max. rate - 406 @ 10:15 PM

(This data not plotted)

(1) TIME	(2) at (in)	(3) (in)	(4) at (in)	(5) (in)	(6) Total Cal. 24 Hr. (in)
9:00 PM	0	0	0	0	0
9:15 PM	1.5	1.5	1.5	1.5	1.5
9:30 PM	1.5	3.0	3.0	3.0	3.0
9:45 PM	1.5	4.5	4.5	4.5	4.5
10:00 PM	2.7	7.2	7.2	7.2	7.2
10:15 PM	2.7	9.9	9.9	9.9	9.9
10:30 PM	2.7	12.6	12.6	12.6	12.6
10:45 PM	2.7	15.3	15.3	15.3	15.3
11:00 PM	2.7	18.0	18.0	18.0	18.0
11:15 PM	2.7	20.7	20.7	20.7	20.7
11:30 PM	2.7	23.4	23.4	23.4	23.4
11:45 PM	2.7	26.1	26.1	26.1	26.1
12:00 AM	2.7	28.8	28.8	28.8	28.8
12:15 AM	2.7	31.5	31.5	31.5	31.5
12:30 AM	2.7	34.2	34.2	34.2	34.2
12:45 AM	2.7	36.9	36.9	36.9	36.9
1:00 AM	2.7	39.6	39.6	39.6	39.6
1:15 AM	2.7	42.3	42.3	42.3	42.3
1:30 AM	2.7	45.0	45.0	45.0	45.0
1:45 AM	2.7	47.7	47.7	47.7	47.7
2:00 AM	2.7	50.4	50.4	50.4	50.4

STORM NO. 39

• AVERAGE OF STD. GAGES 2 & 10 - APPLIED TO D-3

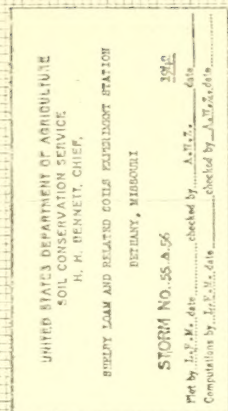
STATION		Day
Area (acres)	40.2	40.2
Drainage basin (sq. mi.)	0.6	0.6
Area (sq. mi.)	0.6	0.6
Drainage basin (sq. mi.)	0.6	0.6
Temperature (max. & min.)	77 - 56	77 - 56
Soil (major type)	7 - 9	7 - 9
Percent of area	7 - 9	7 - 9
Slope, average (percent)	6.7	6.7
Gen. type	Gen.	Gen.
Height (ft.)	7 - 9	7 - 9
Distance (miles)	7 - 9	7 - 9
Soil loss (tons per acre)	1.5	1.5
Power		

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. W. HARRIS, DIST. OFF.
STATION 1000 AND 1000
STATION, MISSOURI

STORM NO. 39
Put by J. H. H. etc. checked by A. H. Z. etc.
Compilation by J. H. H. etc. checked by A. H. Z. etc.

TIME	RAIN	WIND	TEMP.	HUMID.
9:00 PM	0.0	0.0	77	56
9:15 PM	1.5	0.0	77	56
9:30 PM	1.5	0.0	77	56
9:45 PM	1.5	0.0	77	56
10:00 PM	2.7	0.0	77	56
10:15 PM	2.7	0.0	77	56
10:30 PM	2.7	0.0	77	56
10:45 PM	2.7	0.0	77	56
11:00 PM	2.7	0.0	77	56
11:15 PM	2.7	0.0	77	56
11:30 PM	2.7	0.0	77	56
11:45 PM	2.7	0.0	77	56
12:00 AM	2.7	0.0	77	56
12:15 AM	2.7	0.0	77	56
12:30 AM	2.7	0.0	77	56
12:45 AM	2.7	0.0	77	56
1:00 AM	2.7	0.0	77	56
1:15 AM	2.7	0.0	77	56
1:30 AM	2.7	0.0	77	56
1:45 AM	2.7	0.0	77	56
2:00 AM	2.7	0.0	77	56

SHIRAZI, H.
JAMES S. S. S. S. S.



2:00 PM

3:00

4:00

5:00

6:00

7:00

Rain on June 20, 1942
Watershed D-3

RATE OF RAINFALL IN INCHES PER HOUR

RATE OF RAINFALL
IN INCHES PER HOURPRECIPITATION OVER NO. 2
ACCUMULATED IN FALL - 1.71"

D-3 - 11 in. R.O. @ 7:00 AM

NATURAL AROUND OVER AND
AFTER THE INDICATED CLOUDS

7:50 AM @ 8:05 AM

Area (acres)	14.085
Preceding Rain (in.)	4.07
date begun	June 19
direction (course)	---
Temperature (max. & min.)	85 - 60
Soil (moist type)	Shallow Loam
Moisture, average (percent)	72.5
max. min.	6.7
Cover, type	---
height (ft.)	30 - 40 in.
date last cultivated	---
Soil loss (tons per acre)	2.1025
Remarks	---

* Data from Storm No. 55 & 56.
as Data obtained by field accompanying storm.

(1) TIME (7)	(2) at (MIN)	(3) Zd (IN)	(4) ad (IN)	(5) i. $\frac{ad}{Zd}$ (100/IN)	(6) $\frac{ad}{Zd}$ (100/IN)
1:00 AM	0	.00	.00	.00	.00
1:15	15	.06	.06	.06	.06
1:30	30	.07	.07	.12	.12
1:45	45	.08	.08	.12	.12
2:00	55	.12	.12	.06	.06
2:15	5	.04	.04	.19	.19
2:30	5	.05	.05	.36	.37
2:45	5	.08	.08	.18	.18
3:00	5	.13	.13	.10	.10
3:15	5	.13	.13	.21	.21
3:30	5	.14	.14	.20	.20
3:45	5	.16	.16	.24	.24
4:00	10	.16	.16	.00	.00
4:15	15	.10	.10	.12	.12
4:30	15	.08	.08	.24	.24
4:45	15	.08	.08	.00	.00
5:00	15	.08	.08	.00	.00
5:15	20	.06	.06	.60	.60
5:30	20	.06	.06	.00	.00
5:45	20	.06	.06	.00	.00
6:00	20	.06	.06	.00	.00
6:15	20	.06	.06	.00	.00
6:30	20	.06	.06	.00	.00
6:45	20	.06	.06	.00	.00
7:00	20	.06	.06	.00	.00
7:15	20	.06	.06	.00	.00
7:30	20	.06	.06	.00	.00
7:45	20	.06	.06	.00	.00
8:00	20	.06	.06	.00	.00
8:15	20	.06	.06	.00	.00
8:30	20	.06	.06	.00	.00
8:45	20	.06	.06	.00	.00
9:00	20	.06	.06	.00	.00
9:15	20	.06	.06	.00	.00
9:30	20	.06	.06	.00	.00
9:45	20	.06	.06	.00	.00
10:00	20	.06	.06	.00	.00
10:15	20	.06	.06	.00	.00
10:30	20	.06	.06	.00	.00
10:45	20	.06	.06	.00	.00
11:00	20	.06	.06	.00	.00
11:15	20	.06	.06	.00	.00
11:30	20	.06	.06	.00	.00
11:45	20	.06	.06	.00	.00
12:00	20	.06	.06	.00	.00
12:15	20	.06	.06	.00	.00
12:30	20	.06	.06	.00	.00
12:45	20	.06	.06	.00	.00
1:00	20	.06	.06	.00	.00
1:15	20	.06	.06	.00	.00
1:30	20	.06	.06	.00	.00
1:45	20	.06	.06	.00	.00
2:00	20	.06	.06	.00	.00
2:15	20	.06	.06	.00	.00
2:30	20	.06	.06	.00	.00
2:45	20	.06	.06	.00	.00
3:00	20	.06	.06	.00	.00
3:15	20	.06	.06	.00	.00
3:30	20	.06	.06	.00	.00
3:45	20	.06	.06	.00	.00
4:00	20	.06	.06	.00	.00
4:15	20	.06	.06	.00	.00
4:30	20	.06	.06	.00	.00
4:45	20	.06	.06	.00	.00
5:00	20	.06	.06	.00	.00
5:15	20	.06	.06	.00	.00
5:30	20	.06	.06	.00	.00
5:45	20	.06	.06	.00	.00
6:00	20	.06	.06	.00	.00
6:15	20	.06	.06	.00	.00
6:30	20	.06	.06	.00	.00
6:45	20	.06	.06	.00	.00
7:00	20	.06	.06	.00	.00
7:15	20	.06	.06	.00	.00
7:30	20	.06	.06	.00	.00
7:45	20	.06	.06	.00	.00
8:00	20	.06	.06	.00	.00
8:15	20	.06	.06	.00	.00
8:30	20	.06	.06	.00	.00
8:45	20	.06	.06	.00	.00
9:00	20	.06	.06	.00	.00
9:15	20	.06	.06	.00	.00
9:30	20	.06	.06	.00	.00
9:45	20	.06	.06	.00	.00
10:00	20	.06	.06	.00	.00
10:15	20	.06	.06	.00	.00
10:30	20	.06	.06	.00	.00
10:45	20	.06	.06	.00	.00
11:00	20	.06	.06	.00	.00
11:15	20	.06	.06	.00	.00
11:30	20	.06	.06	.00	.00
11:45	20	.06	.06	.00	.00
12:00	20	.06	.06	.00	.00
12:15	20	.06	.06	.00	.00
12:30	20	.06	.06	.00	.00
12:45	20	.06	.06	.00	.00
1:00	20	.06	.06	.00	.00
1:15	20	.06	.06	.00	.00
1:30	20	.06	.06	.00	.00
1:45	20	.06	.06	.00	.00
2:00	20	.06	.06	.00	.00
2:15	20	.06	.06	.00	.00
2:30	20	.06	.06	.00	.00
2:45	20	.06	.06	.00	.00
3:00	20	.06	.06	.00	.00
3:15	20	.06	.06	.00	.00
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